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BULLETIN
Issued Quarterly.

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May, 1908.

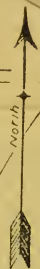
CATALOGUE
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AGRICULTURAL COLLEGE
OF UTAH
FOR
1908-1909

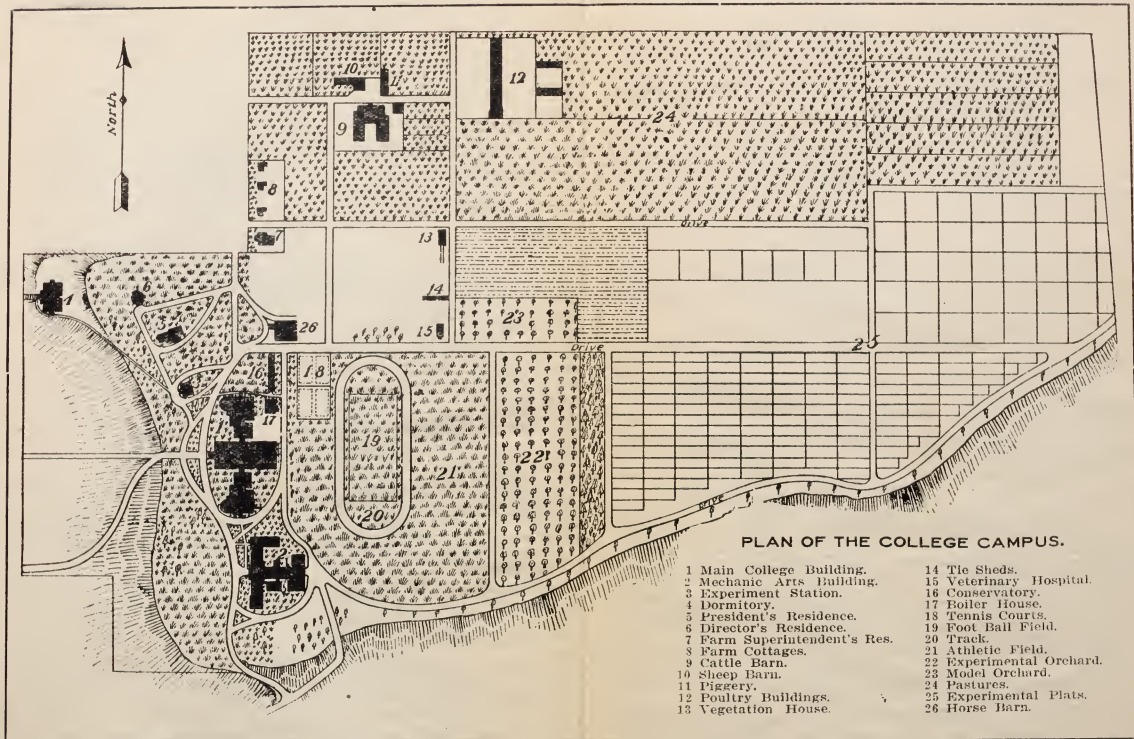
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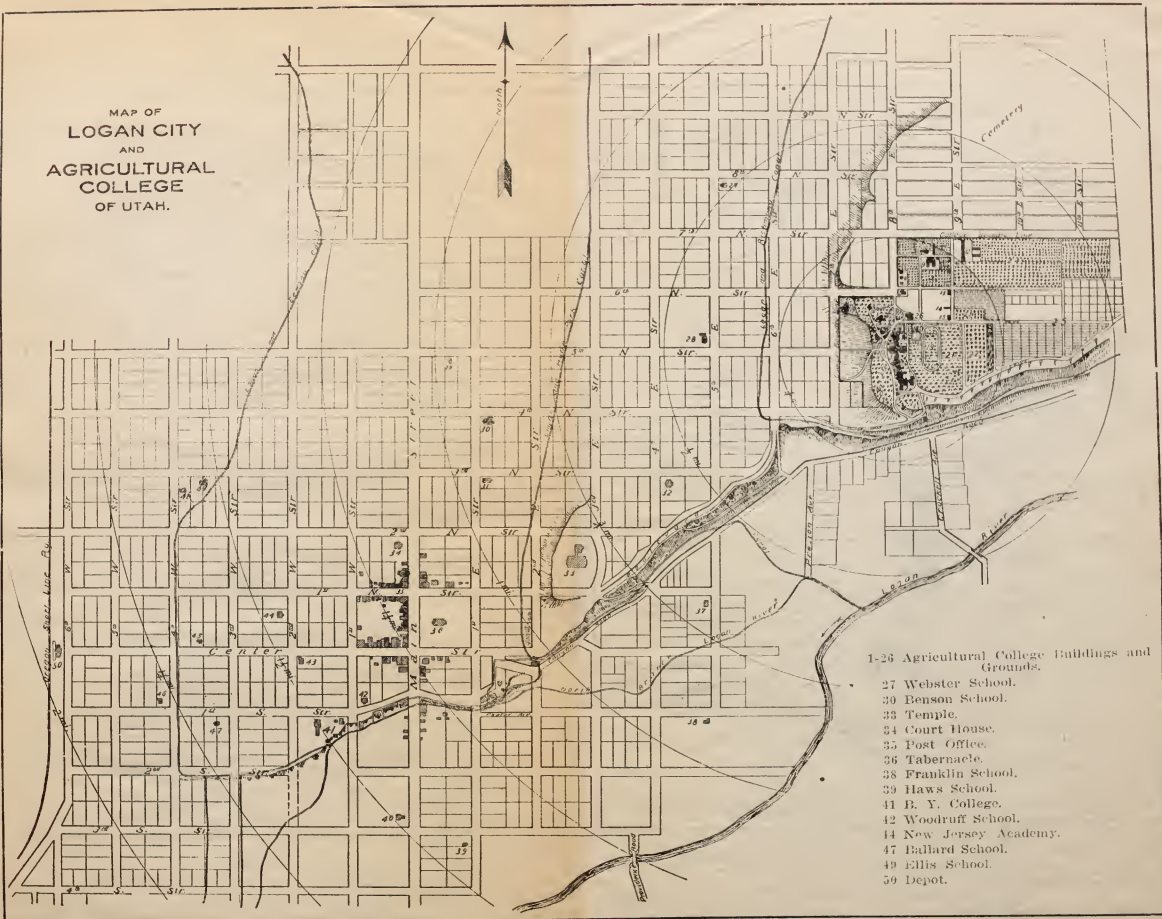


MAP OF
LOGAN CITY
AND
AGRICULTURAL
COLLEGE
OF UTAH.





MAP OF
LOGAN CITY
AND
AGRICULTURAL
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OF UTAH.



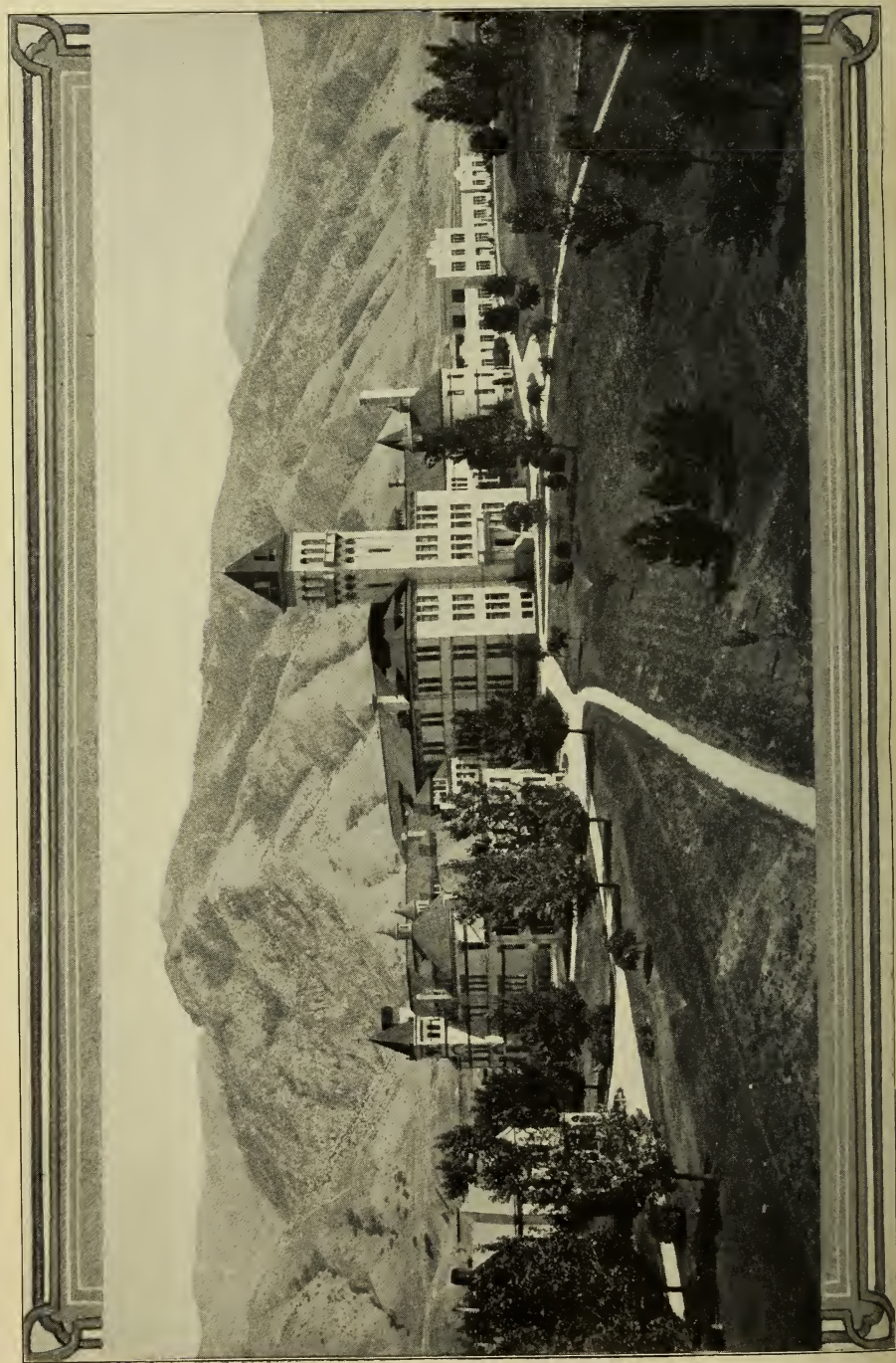
- 1-26 Agricultural College Buildings and Grounds.
27 Webster School.
30 Benson School.
35 Temple.
34 Court House.
37 Post Office.
36 Tabernacle.
38 Franklin School.
39 Haws School.
41 B. Y. College.
42 Woodruff School.
44 New Jersey Academy.
47 Ballard School.
49 Ellis School.
50 Depot.



VIEW ON THE GROUNDS.



VIEW FROM COLLEGE HILL.



GENERAL VIEW OF BUILDINGS AND GROUNDS

CATALOGUE

OF THE

AGRICULTURAL COLLEGE

OF UTAH

FOR

1908-1909

With List of Students for 1907-1908

LOGAN, UTAH

Published by the College
May, 1908

1908.

JANUARY

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1909.

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COLLEGE CALENDAR, 1908-1909.

FIRST TERM.

1908.

September 15, Tuesday :	Entrance examinations. Registration of former students, and of new students who are admitted on certificates.
September 16, Wednesday :	Instruction begins.
November 25, Wednesday :	Thanksgiving recess begins.
December 1, Tuesday :	Instruction resumed.
December 19, Saturday :	Holiday recess begins.

1909.

January 5, Tuesday :	Instruction resumed. Winter courses begin.
January 23, Saturday :	First term ends. Winter course in Agriculture ends.

SECOND TERM.

January 26, Tuesday :	Second term begins.
March 27, Saturday :	Winter courses in Domestic Arts and Mechanic Arts end.
April —, ——— :	Arbor Day.
May 30, Sunday :	Baccalaureate sermon.
May 31, Monday :	Class Day.
June 1, Tuesday :	Commencement. Alumni Reunion.
June 2, Wednesday :	Summer vacation begins.

BOARD OF TRUSTEES.

LORENZO N. STOHL.....	Brigham
THOMAS SMART.....	Logan
SUSA YOUNG GATES.....	Salt Lake City
JOHN Q. ADAMS.....	Logan
ELIZABETH C. McCUNE.....	Salt Lake City
J. W. N. WHITECOTTON.....	Provo
DR. A. S. CONDON.....	Ogden

OFFICERS OF THE BOARD OF TRUSTEES.

LORENZO N. STOHL.....	President
ELIZABETH C. McCUNE.....	Vice President
JOHN T. CAINE, JR.....	Recording Secretary and Auditor
JOHN L. COBURN.....	Financial Secretary
ALLAN M. FLEMING.....	Treasurer

STANDING COMMITTEES OF THE BOARD OF TRUSTEES.

Executive Committee.

Lorenzo N. Stohl, Mrs. A. W. McCune and Thomas Smart.

Committee on Agriculture.

John Q. Adams, Thomas Smart and A. S. Condon.

Committee on Mechanic Arts.

Thomas Smart, J. W. N. Whitecotton and John Q. Adams.

Committee on Domestic Science and Arts.

Susa Y. Gates, Mrs. A. W. McCune and A. S. Condon.

Committee on Commerce.

A. S. Condon, J. W. N. Whitecotton and Mrs. A. W. McCune.

Committee on Experiment Station.

Thomas Smart, Lorenzo N. Stohl and John Q. Adams.

Committee on Faculty and Courses of Study.

J. W. N. Whitecotton, A. S. Condon and Susa Y. Gates.

Visitorial Committee.

Mrs. A. W. McCune, Susa Y. Gates and J. W. N. Whitecotton.

Auditor.

J. W. N. Whitecotton.

Officers of Administration and Instruction.

THE COLLEGE FACULTY.

(Arranged in Groups in the Order of Seniority of Appointment.)

JOHN ANDREAS WIDTSOE, A. M., Ph. D.,

PRESIDENT.

Professor of Chemistry.

WILLARD SAMUEL LANGTON, B. S.,

Professor of Mathematics.

ELMER DARWIN BALL, M. Sc., Ph. D.,

DIRECTOR OF EXPERIMENT STATION.

Professor of Zoology.

GEORGE WASHINGTON THATCHER,

Professor of Music.

ROBERT STARR NORTHROP, B. S.,

Professor of Horticulture and Botany.

GEORGE THOMAS, A. M., Ph. D.,

Professor of Economics.

WILLIAM PETERSON, B. S.,*

Professor of Geology.

*On leave of absence.

AGRICULTURAL COLLEGE OF UTAH.

HYRUM JOHN FREDERICK, D. V. M.,
Professor of Veterinary Science.

FRANK RUSSELL ARNOLD, A. M.,
Professor of Modern Languages.

HOWARD R. PERRY, CAPT., U. S. A.,
Professor of Military Science and Tactics.

JOSEPH WILLIAM JENSEN, S. B.,
Professor of Irrigation Engineering.

JAMES CHRISTIAN HOGENSON, M. S. A.,
Professor of Agronomy.

CHRISTIAN LARSEN, A. M.,
Professor of English.

SAMUEL HENRY GOODWIN, B. D.,
Professor of Economic Ornithology.

LEWIS ALFORD MERRILL, B. S.,
SUPERINTENDENT OF AGRICULTURAL EXTENSION WORK.

JOHN THOMAS CAINE, JR., B. S.,
REGISTRAR; SECRETARY OF THE FACULTY AND BOARD OF TRUSTEES.

EDWARD GAIGE TITUS, M. S.,
Professor of Entomology.

ROBERT STEWART, B. S.,
Professor of Chemistry.

JOHN THOMAS CAINE, III., M. S. A.,
Professor of Animal Husbandry.

FRANKLIN LORENZO WEST, B. S.,
Professor of Physics.

WALTON KIRK BRAINERD, B. S.,
Professor of Dairy Husbandry.

CLAYTON TRYON TEETZEL, LL. B.,
Professor of Physical Education.

BLANCHE COOPER, B. S.,
Associate Professor of Domestic Science.

RHODA BOWEN COOK,
Assistant Professor of Domestic Arts.

ELMER GEORGE PETERSON, B. S.,
Assistant Professor of Zoology and Entomology.

CALVIN FLETCHER, B. Pd.,
Assistant Professor of Art.

JOSEPH EAMES GREAVES, M. S.,
Assistant Professor of Agricultural Chemistry.

DAVID EDMUND STEPHENS, B. S.,
Assistant Professor of Commerce.

N. ALVIN PEDERSEN, A. B.,
Assistant Professor of English.

AMANDA HOLMGREN, B. S.,
Assistant Professor of English.

JOSHUA PERCY GODDARD, A. B.,
Assistant Professor of Accounting.

ELIZABETH CHURCH SMITH, B. L.,
LIBRARIAN.

AUGUST J. HANSEN,
Foreman in Carpentry.

EDWARD PARLEY PULLEY, B. S.,
Instructor in Mechanical Engineering.

CHARLES WALTER PORTER, B. S.,*
Instructor in Chemistry.

ROY RUDOLPH, B. S.,
Instructor in Mathematics.

GERTRUDE VIBRANS,
Instructor in Sewing.

JONATHAN SOCKWELL POWELL,*
Instructor in Art.

FRANK S. HARRIS, B. S.,
Instructor in Chemistry.

SARA HUNTSMAN,
Instructor in English.

INEZ POWELL, B. S.,
Instructor in Domestic Science.

*On leave of absence.

AARON NEWHEY,
Instructor in Forging.

CHARLOTTE KYLE, A. M.,
Instructor in English and History.

JOHN L. COBURN, B. S.,
FINANCIAL SECRETARY.
Instructor in Mathematics.

JOHN D. VAN WAGONER,
PRESIDENT'S PRIVATE SECRETARY.

ISAAC BLAIR EVANS, A. B.,
Instructor in History.

HAZEL LOVE, B. S.,
Instructor in Domestic Science.

WILLIAM SPICKER,
Instructor in Violin.

LOUIE E. LINNARTZ,
Instructor in Music.

S. E. CLARK,
Instructor in Piano and Cornet.

GEORGE M. TURPIN,
Instructor in Poultry Husbandry.

JOHN STEPHENS.
Instructor in Agronomy.

W. L. WALKER, B. S.,
Instructor in Chemistry.

FRANK THATCHER,
Assistant in Carpentry.

J. R. HORTON,
Assistant in Entomology.

JEAN CROOKSTON,
Assistant in Sewing.

WILLIAM A. FREW,
Assistant in Forging.

HOWARD P. MADSEN,
Assistant in Carpentry.

HATTIE SMITH,
Assistant in Library.



CHARLES BATT,
Superintendent of Buildings and Grounds.

RASMUS OLUF LARSEN,
Head Janitor.

THE COLLEGE COUNCIL.

THE PRESIDENT, *Chairman.*

THE REGISTRAR, *ex officio.*

PROFESSOR WILLARD SAMUEL LANGTON.

PROFESSOR ELMER DARWIN BALL.

PROFESSOR GEORGE WASHINGTON THATCHER.

PROFESSOR ROBERT STARR NORTHROP.

PROFESSOR GEORGE THOMAS.

PROFESSOR WILLIAM PETERSON.

PROFESSOR HYRUM JOHN FREDERICK.

PROFESSOR FRANK RUSSELL ARNOLD.

CAPTAIN HOWARD R. PERRY.

PROFESSOR JOSEPH WILLIAM JENSEN.

PROFESSOR JAMES CHRISTIAN HOGENSON.

PROFESSOR CHRISTIAN LARSEN.

PROFESSOR SAMUEL HENRY GOODWIN.

PROFESSOR LEWIS ALFORD MERRILL.

PROFESSOR EDWARD GAIGE TITUS.

PROFESSOR ROBERT STEWART .

PROFESSOR JOHN THOMAS CAINE III.

PROFESSOR FRANKLIN LORENZO WEST.

PROFESSOR WALTON KIRK BRAINERD.

PROFESSOR CLAYTON T. TEETZEL,

ASSOCIATE PROFESSOR BLANCHE COOPER.

ASSISTANT PROFESSOR RHODA BOWEN COOK.

ASSISTANT PROFESSOR ELMER GEORGE PETERSON.

ASSISTANT PROFESSOR CALVIN FLETCHER.

ASSISTANT PROFESSOR JOSEPH EAMES GREAVES.

ASSISTANT PROFESSOR DAVID EDMUND STEPHENS.

ASSISTANT PROFESSOR N. ALVIN PEDERSEN.

ASSISTANT PROFESSOR AMANDA HOLMGREN.

ASSISTANT PROFESSOR JOSHUA PERCY GODDARD.

EXPERIMENT STATION STAFF.

ELMER DARWIN BALL,
Director and Entomologist.

ROBERT STARR NORTHROP,
Horticulturist.

HYRUM JOHN FREDERICK,
Veterinarian.

JOHN T. CAINE, III.,
Animal Husbandry.

ROBERT STEWART,
Chemist.

JAMES CHRISTIAN HOGENSON,
Agronomist.

SAMUEL H. GOODWIN,
Economic Ornithologist.

EDWARD GAIGE TITUS,
Entomologist.

WALTON KIRK BRAINERD,
Dairyman.

JOSEPH WILLIAM JENSEN,
Irrigation Engineer.

JOSEPH EAMES GREAVES,
Associate Chemist.

CHARLES W. PORTER,
Photographer.

JOHN STEPHENS,
Assistant Agronomist.

HENRY WALLACE CROCKETT,
Assistant Horticulturist.

F. D. FARRELL,
Assistant Agronomist.

FRANK S. HARRIS,
Assistant Chemist.

W. L. WALKER,
Assistant Chemist.

STANDING COMMITTEE.

1908-1909.

The President of the College is *ex officio* a member of each standing committee.

1. *Agriculture*.—Professors Ball, Northrop, Frederick, Høgenson.

2. *Domestic Science*.—Professors Cooper, Cook, Stewart.

3. *Commerce*.—Professors Thomas, Stephens, Goddard.

4. *Mechanic Arts*.—Professors Jensen, Fletcher, Mr. Hansen, Mr. Pulley.

5. *General Science*.—Professors Arnold, Thatcher, Titus, West.

6. *Scholarship and Graduation*.—Professors William Peterson, Arnold, Titus.

7. *Extension Work*.—Professors Ball, Frederick, Caine, III, Miss Love.

8. *College Publications*.—Professors Larsen, Holmgren, N. A. Pedersen, E. G. Peterson.

9. *Attendance and Student Affairs*.—Professors Caine, Jr., Thomas, Jensen, Cooper, Holmgren.

10. *Athletics*.—Professors Langton, Perry, William Peterson, Caine, III.

11. *Publicity*.—Professors E. G. Peterson, Arnold, Høgenson.

12. *Entrance Requirements*.—Professor Stephens, Mr. Rudolph, Mr. Evans.

13. *Student Employment*.—Professors Stewart, Caine, Jr., Frederick, Mr. Hansen, Mr. Stephens.

14. *Student Body Organization*.—Professors Langton, Ball, Thomas.

AGRICULTURAL COLLEGE OF UTAH.

General Information.

The Agricultural College of Utah constitutes part of the public school system of the State. It comprises five different schools,—the school of Agriculture, the School of Domestic Science and Arts, the School of Commerce, the School of Mechanic Arts, and the School of General Science; also the Agricultural Experiment Station, which, while not providing directly for instructional work, is one of the most important departments of the institution. The organization, purpose, and equipment of the College, together with the character and extent of the work offered, are described in the following pages.

HISTORY.

The Agricultural College of Utah was founded in 1888, when, on March 8th, the Legislative Assembly accepted the terms of the national law passed by Congress on July 2d, 1862. Under this Act of Congress, and the Enabling Act, providing for the admission of Utah as a state, 200,000 acres were granted to the State of Utah, from the sale of which lands there should be established a perpetual fund, the interest to be used in maintaining the College.

Under the Hatch Act, approved in 1887, the State receives \$15,000 annually for the Experiment Station.

Under the Morrill Act of 1890, the State receives \$25,000 annually for instruction in the Agricultural College.

Under the Adams Act of 1906, the State will ultimately receive an additional \$15,000 annually for research work by the Experiment Station.

Under the Nelson Act of 1907, the Morrill Act was so amended that the State will receive an increase of \$5,000 annually, until the annual amount so received reaches \$50,000 per year.

These various federal appropriations, together with the annual income from the land-grant fund, represent the income from the general government, but as most of these funds must be used in accordance with the law for specific purposes, the institution is dependent on State appropriations for funds with which to carry on the work of instruction, etc. These needs have been generously met in the past by the various Legislative Assemblies of the State. In 1888 the sum of \$25,000 was appropriated for buildings, and the county of Cache and the city of Logan gave one hundred acres of land on which to locate the College. In September, 1890, the institution was first opened for the admission of students, degree courses being offered in Agriculture, Domestic Arts, Civil Engineering, Mechanic Arts, and Commerce; also a Preparatory Course, and short courses in Agriculture and Engineering. Since that time the State has, on various occasions, appropriated sufficient funds to erect and maintain in order all the buildings described in a later section, besides providing largely for instruction.

Since that time, also, many improvements have been made in the courses; some have been abandoned, several Manual Training courses in Agriculture, Mechanic Arts, and Domestic Science have been added, the standard of the College work has been raised, and in 1903 the Board of Trustees established the School of Agriculture, the School of Domestic Science, the School of Mechanic Arts, the School of Commerce, and the School of General Science.



SUITE OF SEWING ROOMS.



CAST OF PYGMALION AND GALATEA.



IN THE KITCHENS.

GOVERNMENT.

The government of the College is vested primarily in the Board of Trustees, and, under their control, the three other administrative bodies,—the College Council, the College Faculty, and the Staff of the Experiment Station. These, in their several capacities, determine the policy and maintain the efficiency of the institution.

THE BOARD OF TRUSTEES consists of seven members, appointed by the Governor with the approval of the State Senate. This Board assumes the legal responsibility of the institution, cares for its general interests, and directs its course by the enactment of all necessary by-laws and regulations. Vested in it is the power to establish professorships and to employ the instructing force and other officers of the College.

Between sessions, the power of the trustees rests with an executive committee, whose actions are referred to the Board for their approval. Another committee is concerned with the funds and accounts of the College, while a third has general charge of all building and repairs throughout the institution. In addition to these, there are committees, largely advisory, having to do with the employment and service of College officers, and with the work of particular departments.

THE COLLEGE COUNCIL consists of the President of the Board of Trustees, the President of the College, the Registrar, and the professors, the associate professors, and the assistant professors. All the important questions of discipline and policy are considered by this body.

THE COLLEGE FACULTY includes the President, the professors, the associate professors, the assistant professors, the librarian, the instructors, and the assistants. As an administrative body it is concerned with the ordinary questions of methods and discipline and with various matters pertaining to the general welfare

of the College. Through its standing committees it is in more intimate contact with the student body and with the life and interests of the college community.

THE STANDING COMMITTEES have delegated to them the immediate direction of all the various phases of college life, such as the enrollment and progress of students in the various schools, and the general direction of the work there carried on. The conduct of the student in his college home and his regularity in performing college duties; the publications of the College and the students; the interests of the students on the athletic field, in the amusement halls, and in their various organizations—all these things are within the province of appropriate committees, consisting largely of members of the council.

THE EXPERIMENT STATION STAFF consists of the President of the College, the Director of the Station, and the chiefs, with their assistants, of the departments of Agronomy, Horticulture, Animal Husbandry, Dairy Husbandry, Entomology, Chemistry, Irrigation Engineering, Poultry Culture, Veterinary Science, and Forestry. This body is employed in the investigation of problems peculiar to agriculture in this portion of the country, the purpose being to improve conditions and results. It is further responsible for the circulation, through private correspondence and regular bulletins, of such information as is of practical value to the farming communities.

THE STUDENTS. The College is maintained at public expense for the public good. The students, therefore, are under a peculiar obligation to perform faithfully all their duties to the State, the institution, and the community. Most important of these is an active interest in all that concerns the moral and intellectual welfare of the College. Regularity of attendance, faithful attention to studies, and exemplary personal conduct are insisted upon at all times, and the administrative bodies of the College are fully empowered to secure these results.

POLICY.

It is the policy of the Agricultural College of Utah, in accordance with the spirit of the law under which it is organized, to provide a liberal, thorough, and practical education. The two extremes in education, empiricism and the purely theoretical, are avoided, the practical being based upon, and united with, the thoroughly scientific. All the practical work, on the farm, in the orchards, gardens, dairy, commercial rooms, kitchen, sewing rooms, different scientific laboratories, and carpentry, forge, and machine shops, is done in strict accordance with scientific principles. In addition to the practical work of the different courses, students are thoroughly trained in the related subjects of science, and in mathematics, history, English, and modern languages. While the importance of practical training is emphasized, the disciplinary value of education is kept constantly in view. It is recognized that the mind, the eye and the hand must be trained together to secure symmetrical development. The object is to inculcate habits of industry and thrift, of accuracy and reliability, and to foster all that makes for right living and good citizenship.

LOCATION, BUILDINGS AND GROUNDS.

The Agricultural College of Utah is in Logan, the county seat of Cache County, which is one of the most prosperous agricultural counties in the State. The city has a population of about 7,000; it is noted for its freedom from vice, is quiet, orderly, clean, and generally attractive, with neat homes, good, substantial public buildings, electric lights, and a water system. The citizens are thrifty and progressive. The College is beautifully situated on a broad hill overlooking the city, one mile east of Main street, and commands a view of the entire valley and of its surrounding mountain ranges. The beauty of the location is perhaps unsurpassed by that of any other college in the country. A few hundred yards to the south is the Logan River. A mile to the east is a magnificent mountain range and a picturesque canyon. In other directions are towns and farms covering the green surface of Cache Valley, and distinctly seen through the clear atmosphere. The valley is a fertile, slightly uneven plain, 4,500 feet above sea level, about twelve by sixty miles in dimensions, almost entirely under cultivation, and completely surrounded by the Wasatch Mountains. It is one of the most beautiful and healthful valleys in the western region.

On this site the College now has nearly twenty buildings, all modern, all well lighted and well heated, and most carefully planned and constructed to meet the purpose for which each was intended.

The Main Building, of brick and stone, is 360 feet long, 200 feet deep in the central part, and four stories high. It contains the large auditorium, seating about 1,500; the administration offices; the library; the gymnasium; and all the various class rooms and laboratories except those of Mechanic Arts.

The Experiment Station Building, a two-story brick structure 45 feet long and 35 feet wide, contains the offices of the sta-

tion staff, the laboratory of the Horticulturist, and a dark room for photographic work.

The Mechanic Arts Building is a one-story brick structure, with the exception of the central part, which is two stories high. It has a ground floor area of 16,600 square feet, divided into four groups of rooms, viz.: wood working department, machine shop, foundry, and draughting rooms. On the second floor are the Mechanic Arts Museum, blue-printing room, room for painting and staining, and a class room.

The Dormitory, a four-story brick building 50 feet by 80 feet, contains 33 rooms for students, besides reception rooms, dining room, kitchen, matron's and employees' rooms, etc. The entire building is steam heated.

Two Conservatories, each 90 by 25 feet, divided into various compartments for the purpose of regulating the temperature, are used to supplement class work in botany, floriculture and horticulture.

The Veterinary Hospital, a two-story stone and frame structure, 18 by 42 feet, contains a well-equipped dispensary, and operating room, stalls, etc.

The Barns. *The horse barn*, a wooden structure, 60 feet square, contains model sanitary stables for horses, storage divisions for hay, grain, and seed, and rooms for carriages and wagons, farm implements, and machinery; also the farm foreman's room, and repair shop. A ten-horsepower electric motor furnishes power for grain threshing, feed grinding, and fodder shredding. *The cattle barn*, 106 feet by 104 feet, is provided with the most modern equipment throughout, including iron stalls, cement floors and mangers, etc. There are accommodations for seventy-five head of cattle; also hospital rooms, feed rooms, a milk room, a root cellar, and storage room for hay and grain. *The sheep barn*, 94 feet by 41 feet, has accommodations for seventy-five sheep, and storage room for feed. *The hog barn* is a wooden structure, 65 feet by 31 feet. It contains two feed rooms, a cook room, an abattoir, and twelve pens, each of which is provided

with an outside run. This building accommodates sixty mature animals.

The Poultry Building covers 230 feet by 25 feet, with yards 100 feet wide on each side. The building is divided into two sections:—first, the brooder section, with a capacity for about one thousand chicks; second, the experimental section, with a capacity of over five hundred hens. The latter is divided into thirty-two pens; it is shut off from the public and used for conducting experiments on the different questions of poultry culture. The building is heated by a hot water system. In the front part are an office a feed and weigh room, a store room and a sleeping apartment. The basement, 18 by 34 feet, is used only for incubators.

The land occupied by the College and its several departments embraces about 116 acres. Of this, thirty-five acres constitute the Campus, tastefully laid out and adorned with flower-beds and specimens and groups of ornamental shrubs and trees. There are broad stretches of lawn, and wide drives and walks leading gracefully from various parts of the Campus to the College buildings. During the summer the conservatory contributes its hardy plants for lawn decoration.

Immediately east of the Main Building are the parade grounds and athletic field, of about ten acres. The farms comprise 71 acres; the orchards and the small fruit and vegetable gardens, 10 acres. All parts of the College grounds are used by the professors in charge of instruction in agriculture and horticulture for the purpose of practical illustration in their respective departments; they are also used for the work of the Experiment Station.

EQUIPMENT.

THE DEPARTMENT OF AGRONOMY is provided with a large collection of agricultural plants and seeds, and other illustrative material. The agricultural laboratory is equipped with balances, a self-registering dynamometer, apparatus for determining the water-holding capacity and specific gravity of soils, etc. The College farm is equipped with the best farming implements and machinery and is divided, for illustrative and experimental purposes, into numerous plats, on which different varieties of farm crops are grown.

For the work in ANIMAL INDUSTRY, general use is made of the College barns, live-stock, dairy, etc. The live-stock includes various breeds of horses, cattle, sheep, and swine. Professor Caine's herd of registered Jerseys furnishes additional material for stock judging.

The dairy occupies a floor space of about three thousand square feet, divided into seven rooms from the various processes of dairy work, and equipped with all the apparatus necessary for the processes of butter and cheese-making and milk-testing. Ample facilities are provided for illustrating the handling of milk for the milk trade, including the Star milk cooler, continuous and intermittent pasteurizers, etc. The milk-testing laboratory is as well equipped as any similar laboratory in the country. The department has an eight-horsepower boiler and a six-horsepower engine, and model cold storage rooms for butter and cheese.

The model poultry house with its equipment affords special facilities for illustrative and practical work with poultry. Several strains of pure-bred chickens, ducks and geese are kept for experimental purposes.

THE BOTANICAL LABORATORY has a good supply of apparatus for systematic and microscopic work. The herbarium contains

3,000 mounted and named specimens, and there are 700 samples of seeds for use in economic botany. The general equipment includes compound microscopes, Bausch and Lomb dissecting microscopes, microtome, and everything necessary for successful botanical work. The orchard and the small fruit and vegetable gardens are used in connection with the work in botany and horticulture for illustrative purposes.

THE VETERINARY LABORATORY is supplied with all the more important surgical instruments, and other material found in a well equipped hospital. A modern operating table, an operating room, box stalls for patients, the necessary medicines, are all at hand. In this laboratory the agricultural students have practice and observation in the treatment of animals.

THE DEPARTMENT OF DOMESTIC SCIENCE AND ARTS is located in the Main Building, occupying the first floor of the south wing, besides several rooms in the basement. On the first floor are the office and reception room; a large lecture room; a laboratory and museum, provided with cabinets, charts, and about three hundred specimens showing the composition of food materials and the processes of their manufacture; a room for instruction in home nursing, with proper furnishings to give practice in making and changing beds for the sick and the general care of the sick room; four large sewing rooms, and a fitting room, furnished with the latest improved machines, small sewing tables, low chairs, cutting tables, tracing boards, electric irons, wardrobes and cupboards for unfinished work, large display cabinets for finished work, and samples, showing the process of manufacturing wool, silk, cotton, and linen. In the basement are two large class kitchens, each containing twelve individual combined work-tables and cupboards, with gas stove on each. The equipment includes two large two-oven coal ranges and a single coal range, an Aladdin oven, and an electric stove. There are ample pantries and store rooms, and all necessary utensils and modern conveniences for teaching cooking. The dining room is furnished with exten-

sion tables, chairs, sideboards, cupboards, fruit closet, and a generous supply of china, silver, and table linen. The laundry room is provided with stationary tubs, a Chicago clothes-drier, ironing tables, skirt boards, and other necessary furnishings.

THE COMMERCIAL DEPARTMENT is equipped for thorough and efficient work in modern business courses. The entire third floor of the front of the Main Building, covering a floor area of 7,225 square feet, is occupied by the department. Each room is specially designed and furnished for the work to be conducted in it. Practice is given in the methods of modern banking, wholesale, retail, and commission trade, and freight, insurance and real estate offices. The room for typewriting contains a full complement of standard machines. The rooms for stenography and penmanship are conveniently furnished for efficient work.

THE MECHANIC ARTS are taught by means of a large and carefully selected equipment for practical work in shop, field and laboratory. The carpentry rooms are supplied with seventy benches, with full sets of tools. The wood-working machinery includes fifteen pattern-makers' lathes, universal saw table, jig and band saws, planer, mortiser and borer, shaper, and sander; and there are the usual clamps, vises, glue-tables, veneer-presses and other special tools required for a shop of this kind. For the work in forging there are provided twenty-three single and eight double forges, each with a complete equipment of anvil and tools. In addition, there are two furnaces, one belted power hammer, drills, special swages, cutting-off machines and leveling tables, with a considerable assortment of special tools. The equipment for foundry work includes iron-melting cupola, brass furnace, core oven, annealing furnaces, flasks, patterns, ladles, crucibles, and full sets of regular tools for flask and floor moulding. The outfit used in carriage building comprises, in addition to the required benches, a full supply of carriage-builders' tools, including hub-boring and boxing machines, spoke-tenoning machine, felloe-boring machine, tire-bender, etc. In the room devoted to machine

work in iron are found six large engine lathes, three universal milling machines, a universal grinding machine, two speed lathes, a large radial drill press, a sensitive drill (built by students), two crank shapers, two large planers, grindstones, and emery wheels; every machine having its regular equipment of tools and attachments. The tool room is well supplied with drills, reamers, cutters of various kinds, files, calipers, etc. All machinery, including blast and exhaust systems for the forge shop and foundry, is electrically driven.

A special Mechanic Arts Library is located in the Mechanic Arts Building. It contains the private library of the professor, with such other books from the general library as may be required for special study. A very extensive list of manufacturers' catalogues has been collected and classified, and forms an important part of this library.

THE BACTERIOLOGICAL LABORATORY is well equipped with modern apparatus for the work offered. Each student is provided with a high-power Leitz or Bausch and Lomb microscope. One microscope with triple nose-piece, fitted with 1-12 and 1-16 oil-immersion objectives, Abbe condenser, and rotary and mechanical stage, is used for identification work. The equipment includes an autoclave, hot air and steam sterilizers, incubator, refrigerators, aerobic plate apparatus, anaerobic tube apparatus, microtome, analytic balance, cages, permanent mounts, glassware, chemicals, stains and culture media.

THE ZOOLOGICAL LABORATORY is equipped with water and gas, and has for use in laboratory work the most improved modern instruments, many enlarged models, a *papier mache* manikin, articulated and disarticulated human skeletons, skeletons from each group of vertebrates, collections of mounted birds, mammals, reptiles, and fishes, and alcoholic material in many groups. The department has exhibition and systematic collections of insects, and the private collections and libraries of the professors are available to students taking work in the department.

THE CHEMICAL LABORATORIES are well equipped for elementary and advanced work in chemistry. Several valuable collections of gums, oils, coloring matters, foods, etc., are important aids to the students in this department. The laboratories are fitted with water, gas, hoods, and all other conveniences.

THE PHYSICAL LABORATORY occupies a suite of rooms on the second floor. The equipment is fairly complete, consisting of all the necessary pieces of apparatus for class demonstration; a set of apparatus for elementary laboratory work, sufficient for sixteen students working on the same experiment; and all pieces required for an experimental course in heat, electricity and light.

THE COLLEGE MUSEUM contains a large number of specimens illustrative of geology and paleontology, vertebrate and invertebrate zoology, including a large series of the insects of the intermountain region, and mineralogy; also about four thousand five hundred species of the Rocky Mountain flora, and a large number of the woods of the United States. An extensive collection of grains represents the produce of Utah and other states. Contributions of fossils, ores, animals, relics, or other material of value to the museums will be highly appreciated. All gifts are labeled and preserved, and the name of the donor is kept on record.

THE ART ROOMS contain many valuable casts, most of which are reproductions of the works of the masters, together with many smaller casts suitable for the more simple work in drawing. A few reproductions of the paintings of the masters, and charts to be used in the work in design are in the equipment; also tables, drawing boards and cases necessary for the work.

THE LIBRARY, with its offices and reading room, occupies the entire front of the second floor of the Main Building. The large, well-lighted reading room is comfortably furnished. The books are shelved on the Library Bureau standard steel stacks, arranged

in alcoves, where tables also are provided for those wishing to do special study. The readers have free access to the shelves.

The library now contains about 17,000 bound volumes and a large number of pamphlets. The books are classified by the Dewey system, and a dictionary card catalogue of the library is now completed. The shelf list is also on cards, and forms a classed catalogue for official use.

The Library is a depository for United States public documents, and receives substantially all documents printed by the government. There are ninety-two periodicals on the subscription list, besides about eighty which are received as exchanges for the publications of the College and of the Experiment Station. Thirty-five newspapers of the state are regularly received and placed on file in the reading room.

THE AGRICULTURAL EXPERIMENT STATION.

THE AGRICULTURAL EXPERIMENT STATION is a department of the College, supported by Congressional appropriations, supplemented by the receipts from the sales of farm products, and by such appropriations as the State Legislature makes from time to time to carry out special lines of work, or for the establishment and support of sub-stations. The station was created for the special purpose of discovering new truths that may be applied in agriculture, and of making new applications of well-established laws. It is, therefore, essentially a department devoted to research; and as such, it does the most advanced work of the College.

The Experiment Station is not, in the ordinary sense, an institution where model farming is carried on. It has a much higher purpose. The practices of the farmer are subjected to scientific tests, in order to determine why one is bad and the other good. Acting on the suggestions thus obtained, new lines of investigation are begun, with the hope that truths of great value to the farmer may be discovered.

The Station has for its present object the study of the underlying laws of irrigation. On the farm, in the orchards, gardens, and barns, experiments are going on that, in time, will lead to the establishment of an art of irrigation based on laws developed by scientific methods. Special investigations for the purpose of encouraging the horticultural, dairy, and poultry industries, and of reclaiming the alkali and arid lands of the state are also in progress.

By an act of the State Legislature of 1903, six experimental farms have been established in different parts of the state, for the purpose of demonstrating the possibilities of dry or arid farming on the soils of Utah. Another act, passed in 1905, established a central experimental farm, which has been located in Utah county. The work on all these sub-stations, including also the Experimental farm near St. George, in Washington county, is placed under the direction of the Experiment Station. In cooperation with the Department of Agriculture, this Station is carrying on extensive investigations in irrigation, drainage, in sugar beet seed production and in alkali land reclamation.

A report and four or five bulletins containing the results of the experiments of the stations are published annually for free distribution among the people of the state.

The Experiment Station has a high educational value. Nearly all the members of the Station Staff are also members of the College Faculty, and the students, therefore, receive at first hand an account of the methods and results of the work of the Station. and training in their application. The opportunities that the Experiment Station offers for advanced work in several branches of science are of great importance. The scientific method and spirit characterize all the operations of the Station, and none can fail to be benefited by a study of the experiments that go on at all times of the year.

The Station Staff are always glad to assist the advanced students of the institution in any investigation they may wish to undertake.

ADMISSION AND GRADUATION.

CONDITIONS FOR ADMISSION. Graduates of the district schools are admitted without examination to the College Preparatory Course, to the high school courses and to the Manual Training Courses. Candidates for admission must be at least fifteen years of age. Persons eighteen years old or over, not graduated from the district schools, will be admitted to the technical work of the Manual Training courses prior to June, 1909, after which time students who cannot show either by certificate or examination that they have completed the work of the eighth grade of the district schools will not be admitted to these courses. Until June, 1909, classes in the elementary branches will be maintained in order that the students referred to above may make up the regular entrance requirements.

Those who have completed the College Preparatory Course are admitted without examination to the four-year college courses in Agriculture, Domestic Science, Commerce and General Science. Students may transfer from one regular course to another by making up all the technical work not completed of the course to which they transfer. No one is allowed to substitute technical work of one course for that of another except by permission of the Faculty.

Other students are admitted to any of the courses leading to degrees, upon the certificates of accredited high schools, or upon satisfactory examination in the required subjects. For a description of these subjects, see the courses outlined, pp. 38-56. Students entering from other schools may be allowed to substitute for some of the required subjects.

Candidates for admission to advanced standing may be required to pass satisfactory examinations in all the work of the preceding years, or to present satisfactory evidence of having

completed an equivalent of such work in some other school or college.

SPECIAL STUDENTS. Persons of mature years, who for satisfactory reasons desire to pursue a special line of study, may be admitted as special students, provided they give evidence of ability to do the work desired. Special students may be allowed to graduate in any of the courses, on condition that they complete the required work and pass the necessary examinations.

REGISTRATION. All students register at the beginning of the collegiate year for the work of the whole year. Changes in registration, and credit for work not registered, will be allowed only by special permission of the Council.

CLASSIFICATION. All regular students are classified as first, second, and third year students in Agriculture, Domestic Science, or Commerce; or as first and second year students in the College Preparatory Course; or as first, second, third and fourth year students in the Manual Training Courses in Mechanic Arts; or as freshman, sophomore, junior, and senior students in any of the four-year courses leading to degrees; according to the lowest year in which they have subjects, provided such subjects are equivalent to one-third of all the work taken; otherwise in the next year above.

GRADUATION. Students who complete the three-year courses in Agriculture, or Commerce, or the four-year course in Manual Training in Mechanic Arts, or the three-year course in Manual Training in Domestic Science receive certificates of graduation. The degrees of Bachelor of Science, Bachelor of Science in Agriculture, Bachelor of Science in Domestic Science, and Bachelor of Science in Commerce, are conferred upon those who complete the regular four-year courses in General Science, Agriculture, Domestic Science, and Commerce, respectively.

To obtain a degree the student must have been in attendance at least one school year preceding the time when the degree may

be conferred. He must have completed all the prescribed work or its equivalent in one of the four-year college schedules. He must have acquired credits for electives according to the grade and number indicated in his schedule. He may be required to pass a satisfactory oral examination on the technical work of his course before a special committee appointed by the president. He must have no grade lower than D in any subject. Four-fifths of all his term grades must be C or better. He must have discharged all College fees.

He must be recommended for graduation by his school faculty and receive the favorable vote of two-thirds of the members of the College Council.

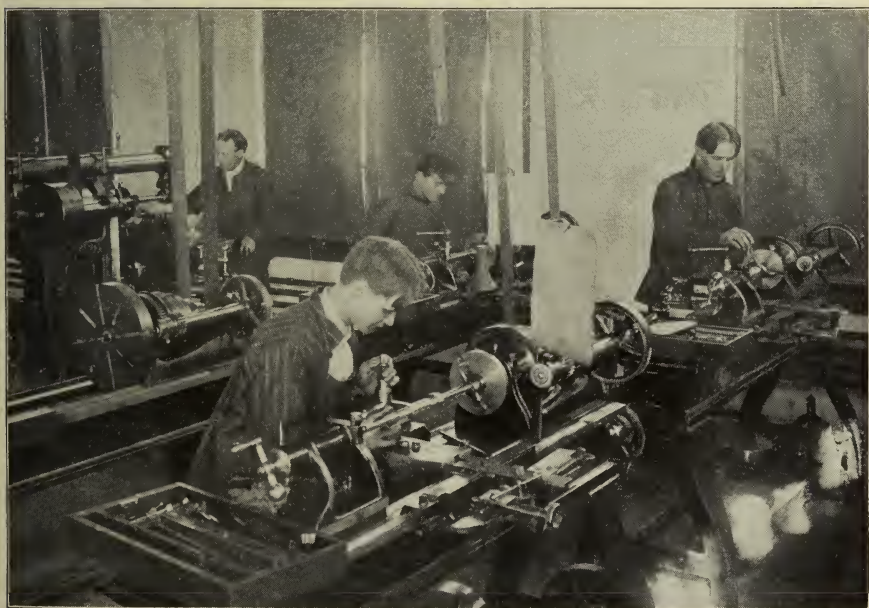
STUDENT SOCIETIES.

THE STUDENT BODY ORGANIZATION. This society embraces all the students of the institution. Its prime object is to foster a proper spirit of college loyalty. It also secures dispatch and efficiency, as well as uniformity, in the administration of all matters pertaining to the entire student body. Realizing the importance to all students of taking part in the various college activities, the organization further provides each member with the maximum amount of proper athletic, theatrical and social recreation at the minimum expense. This society has control of the following student activities:

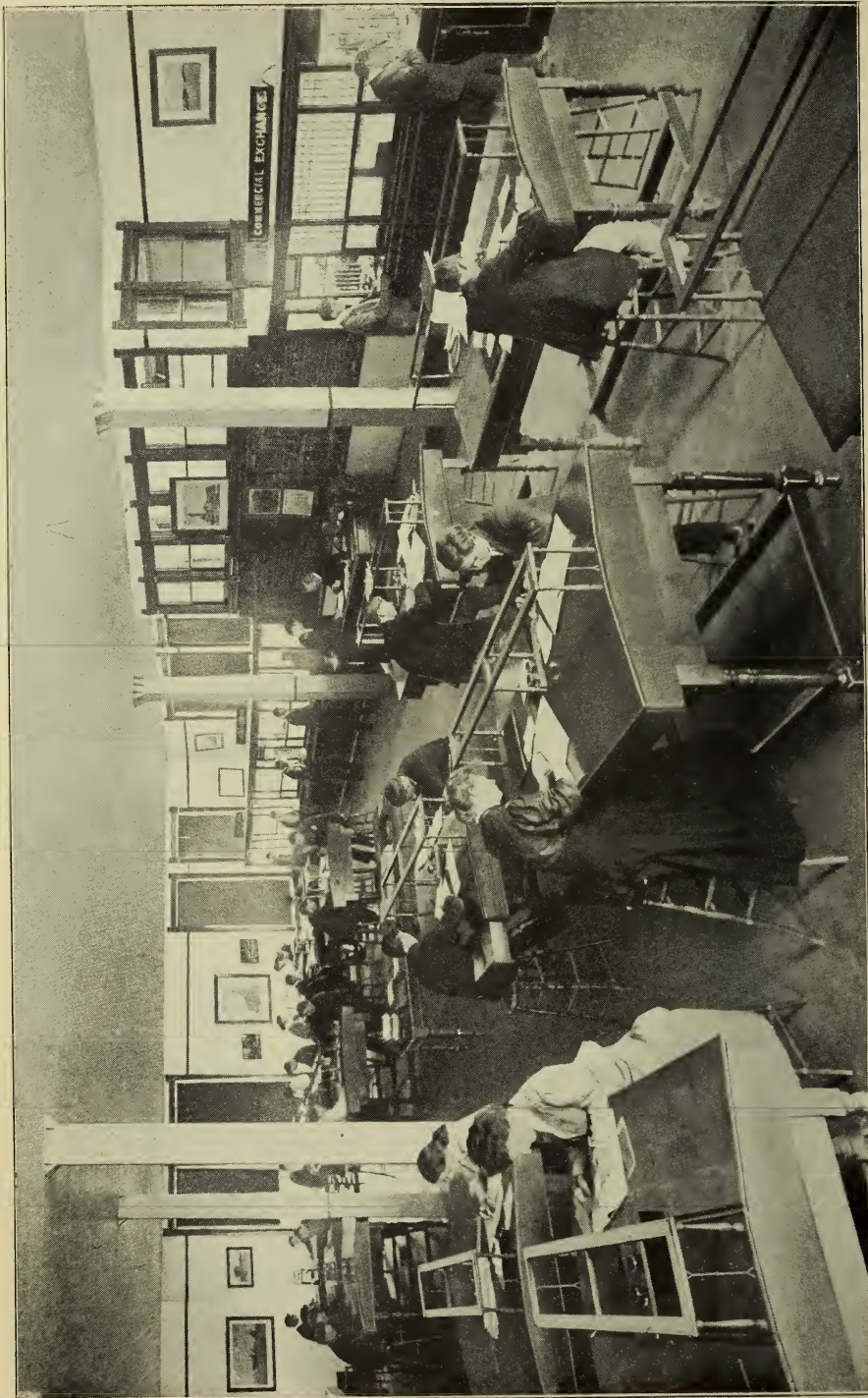
1. *Athletics*, including all inter-class and inter-collegiate contests in football, base ball, basket ball, and track events.
2. *Music*, including all public performances of the Band, the Orchestra, Glee Club, Choir, String Quartette, and Mandolin and Guitar Club.
3. *Theatricals*. Once or twice each season some dramatic performance is given. In the past, three of Shakspeare's comedies, Goldsmith's *She Stoops to Conquer*, and Gilbert's *Pygmalion and Galatea* have been presented.



CLASS IN STOCK JUDGING.



IN THE MACHINE SHOPS.



NEW YORK STOCK EXCHANGE

4. *Debating*. Each year two or more inter-collegiate debates occur. In addition the Debating Club meets regularly for systematic work among its members.

5. *Student Publications*. For six years a monthly magazine, *Student Life*, has been published. Its scope is best indicated by the names of its departments, viz.: Literary, Editorial, Student Affairs, Department Notes, Locals, Alumni and Exchange.

CLUBS. Not affiliated with the Student Body Organization, and standing largely for the interests of the various schools, are the following clubs:

1. *The Agricultural Club*, which aims to keep its members in touch with current events in scientific agriculture. Special lectures, often illustrated, are given at intervals throughout the season.

2. *The Home Seekers' Circle*, an association of the instructors and students in the school of Domestic Science and Arts, having for its special object the dignifying of home work.

3. *The Commercial Club*, working to promote the interests of the Commercial School, to popularize the commercial courses, and to consider matters of interest not encountered in routine work. The club maintains an annual lecture course, given by prominent men throughout the state on topics of special interest to the business man. All commercial students are eligible to membership.

4. *The Mechanic Arts Club*. The students in Mechanic Arts maintain a club, the chief object of which is to encourage its members to keep in touch with current shop and building practice, and to afford a means of closer acquaintance and association during and after their collegiate life. The Club meets fortnightly to hear lectures and discussions by leading artisans.

SORORITIES AND FRATERNITIES. The following societies of limited membership are in active existence among the students:

1. *The Sorosis*, open to college women only, and having for

its object general literary and social culture, as well as the advancement of college loyalty.

2. *The Blue T.*, a society of high school girls, striving to promote sociability and college spirit among the preparatory students.

3. *The Sigma Alpha Fraternity*, open to college men and having for its object social and intellectual progress.

4. *The Pi Zeta Pi Fraternity*, open to college men. Its aims are to promote college loyalty and intellectual advancement.

STUDENTS' EXPENSES.

Tuition is free. Utah students pay an annual entrance fee of \$5. Students from other States must pay \$25. The privileges of the library and museum are free. In the laboratories, workshops, cooking-rooms, and in typewriting, students are charged an incidental fee of \$1 per credit hour. Fees for various student activities,—athletic events, dramatic and musical entertainments, etc., will not exceed \$5.00.

All the boys *above first year and below senior*, must be prepared to purchase a uniform to wear at military drill. This uniform is obtained through the Secretary of the College at actual cost, about fifteen dollars, and has been found more serviceable and far more attractive in appearance than civilian clothes of the same price.

All students in Domestic Science must provide themselves with four white bib aprons and four pairs of half-sleeves. The total cost varies from \$3.50 to \$4.00

The fee charged for a certificate of graduation is \$2.50; and for a diploma, \$5.00. Students are held responsible for any injury done by them to the College property.

Good board and rooms can be obtained in private houses for \$3.50 to \$4.00 per week. By renting rooms and boarding themselves, students are able to reduce the cost of room and board to less than \$2.50 per week. The College Dormitory has accommodations for sixty students.

Schools and Courses of Study.

For the purpose of more efficient administration, the College is divided into five schools: (1) The School of Agriculture; (2) The School of Domestic Science and Arts; (3) The School of Commerce; (4) The School of Mechanic Arts, and (5) The School of General Science. These schools are not educationally separate, but are interdependent and together form a unit.

The School of Agriculture offers (1) A three-year Manual Training Course in Agriculture; (2) Four-year college courses in Agronomy, Horticulture and Entomology, Animal Husbandry and Dairying, Irrigation and Drainage, Veterinary Science, and Forestry. In addition a course in Irrigation Engineering is offered jointly by the Agricultural College and the State School of Mines. The aim of this course is to prepare young men for one of the most important branches of engineering work in the West.

The School of Domestic Science and Arts offers (1) A three-year Manual Training Course in Domestic Science; (2) A four-year college course in Domestic Science.

The School of Commerce offers (1) A three-year high school course in Commerce; (2) A four-year college course in Commerce.

The School of Mechanic Arts offers a four-year course in Manual Training in Mechanic Arts, which may lead to carpentry, forging, machine work, or other trades.

The School of General Science offers (1) A two-year College Preparatory Course; (2) A four-year college course in General Science. Upon completion of the College Preparatory Course a student may enter any one of the four-year courses leading to a degree.

All college courses lead to the degree of Bachelor of Science; all other courses, to certificates.

THE SCHOOL OF AGRICULTURE.

The instruction in Agriculture is provided by the departments of Agronomy, Irrigation and Drainage, Animal Husbandry, Dairy Husbandry, Horticulture, Entomology, and Veterinary Science. The courses of these departments are so arranged as to enable the student to lay a foundation upon which he can build a successful career as a farmer, or develop into a specialist in Agronomy, Animal Industry and Dairying, Entomology, Horticulture, Irrigation, or Veterinary Science. For the student who expects to return to the farm, a Manual Training Course, continuing through three years, has been arranged; and a college course, leading to a degree, is offered for those who desire to secure positions as farm managers, experts in the State or Government employ, or as workers in agricultural faculties and in experiment stations. The three-year course confines itself to laying a foundation that will secure success on the farm; the longer course enables the student to direct his efforts along the special lines with which he is most concerned.

In the junior and senior years, the student is required to specialize in Agronomy, in Irrigation and Drainage, in Animal Husbandry and Dairying, or in Horticulture and Entomology.

Experience has shown that practically all of the students who take this course come from the farm, and it is assumed that they are acquainted with the various manual operations of farm work. The design of the course is, therefore, to teach the sciences that underlie practical agriculture, and sufficient supplementary studies to develop the agricultural students to the intellectual level of the educated in other professions.

The general and department libraries enable the student to become acquainted with a wide range of agricultural and related literature, while the laboratories of the College and the Experiment Station afford opportunity for training and experience that it would be impossible to get from books.

Agriculture is one of the most promising of modern professions. It is growing very rapidly, and, owing to the scientific foundation that recent years have given it, large numbers of intelligent people are adopting it as their means of livelihood. The new agriculture is not a profession of unceasing toil. On the contrary, the freedom, health, intellectual activity and profit to be obtained from intelligent farming are attracting the best classes of people. Utah and the other Western States are offering splendid opportunities to those who prepare themselves for scientific farming. There is a great demand for men who can supervise large farm enterprises; there is a greater demand for men who can act as experts, experimenters or teachers in the schools and other institutions of the State and National Government. The supply of such men does not begin to equal the demand. Every graduate of the School of Agriculture of the Agricultural College is splendidly placed; and a large number of the graduates of the other schools have later entered the work in agriculture.

Students who complete the Manual Training Course in Agriculture receive certificates of graduation. The first two years of all college courses in Agriculture are alike. At the beginning of the junior year the student must choose the subject in which he desires to specialize. Every college course leads to the degree of Bachelor of Science in Agriculture.

MANUAL TRAINING COURSE IN AGRICULTURE.

First Year.

	1st Term	2nd Term
English 4	5	5
Mathematics 2	5	5
Art 1	2	2
Carpentry 5	2	0
Forging 4b	0	2
Physiography	2	2
Animal Husbandry 1	3	0
Elementary Agriculture	0	3
	19	19

Second Year.

English 5	5	5
History 2	3	3
Zoology 1	2	2
Drill	1	1
Entomology 1	3	0
Botany 2	0	3
Irrigation 1	4	0
Veterinary Science 1	0	3
Animal Husbandry 8	0	2
	18	19

Third Year.

English 6	3	3
Drill	1	1
Chemistry 1	5	5
*Electives	10	10
	19	19

ELECTIVES.*

Dairying 1	2	Agricultural Technology 3...	3
Animal Husbandry 7.....	3	Animal Husbandry 2.....	3
Agronomy 1.....	4	Agronomy 3	3
Horticulture 1.....	3	Horticulture 2	4
Dairying 2	2	Irrigation 3	3

*The students will, with the advice of the Agricultural Committee, select the ten elective hours from the courses named.

COLLEGE COURSES IN AGRICULTURE.

Freshman Year.		1st Term	2nd Term
English 6		3	3
Mathematics 4		5	5
Chemistry 1		5	5
Zoology 2		3	3
Drill		1	1
Library Work		1	1
		<u>18</u>	<u>18</u>

Sophomore Year.

Physics 1	3	3
Chemistry 3	3	3
Botany 3 and 4	3	3
German 1 or French 1	3	3
Drill	1	1
Agronomy 3	0	3
Horticulture 1	3	0
Agricultural Technology 1 and 2	2	2
	<u>18</u>	<u>18</u>

AGRONOMY.

Junior Year.

English 7	3	3
German 2 or French 2	3	3
Drill	1	1
Agronomy 1	4	0
Agronomy 2	3	0
Chemistry 5	0	3
Bacteriology 1	3	0
Electives	0	7
	<u>17</u>	<u>17</u>

Senior Year.

Geology 2	3	3
Economics 2	3	3
Horticulture 3	4	0
Botany 5	0	3
Agronomy 4	3	0
Agricultural Technology 3	0	3
Agricultural Technology 4	3	0
Agronomy 7	0	5
Elective	1	0
	<u>17</u>	<u>17</u>

ANIMAL HUSBANDRY AND DAIRYING.

Junior Year.

	1st Term	2nd Term
English 7	3	3
German 2 or French 2	3	3
Animal Husbandry 3	5	0
Animal Husbandry 8	0	2
Bacteriology 1	3	0
Zoology 3 or 6	0	3
Dairying 1 and 2	2	2
Animal Husbandry 2	0	3
Drill	1	1
	17	17

Senior Year.

Economics 2	3	3
Animal Husbandry 4	3	0
Dairying 4	0	3
Chemistry 6	3	3
Geology 2	3	3
Electives	5	5
	17	17

HORTICULTURE AND ENTOMOLOGY.

Junior Year.

	1st Term	2nd Term
English 7	3	3
German 2 or French 2	3	3
Drill	1	1
Entomology 2	3	3
Bacteriology 1	3	0
Horticulture 2	0	4
Botany 5	0	3
Elective	4	0
	<u>17</u>	<u>17</u>

Senior Year.

Economics 2	3	3
Geology 2	3	3
Horticulture 3 and 4	4	4
Chemistry 5	0	3
Electives	7	4
	<u>17</u>	<u>17</u>

IRRIGATION AND DRAINAGE.

Junior Year.

English 7	3	3
German 2 or French 2	3	3
Mathematics 5	5	5
Irrigation 2	3	3
Irrigation 5	3	0
Irrigation 3	0	3
Drill	1	1
	<u>18</u>	<u>18</u>

Senior Year.

Agricultural Technology 4	3	0
Agricultural Technology 3	0	3
Agricultural Technology 5	5	5
Irrigation 6	3	3
Geology 2	3	3
Economics 2	3	3
	<u>17</u>	<u>17</u>

Graduates from the course in Irrigation and Drainage will be admitted without examination to the Junior Year of the Irrigation Engineering course offered jointly by the University of Utah and the Agricultural College. The last two years, in which the technical irrigation work will be done, are spent at the University of Utah, and are as follows:*

Junior Year.

	1st Term	2nd Term
Drawing 3	2	2
Electrical Engineering 4a	3	3
Engineering 3	4	4
Engineering 4a, 4b	1	1
Engineering 5	4	0
Engineering 9a	0	2
Surveying 1a, 1b, 4	3	5
	17	17

Summer.

Surveying 2	Six Weeks
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Senior Year.

Engineering 2a	3	0
Engineering 6	4	0
Engineering 7	3	0
Engineering 9b	2	0
Engineering 10	0	3
Engineering 11, 12	0	2
Engineering 13	0	3
Engineering 14a	2	0
Engineering 14b	0	3
Engineering 14c	0	2
Engineering 18	0	2
Mining 1	3	0
Thesis	0	2
	17	17

*For a description of courses see University Catalogue for 1908-09.

VETERINARY SCIENCE.

Preparatory Year.

	1st Term	2nd Term
English 4	5	5
Mathematics 2	5	5
History 2	3	3
Zoology 1	2	2
Art 1	2	2
Botany 2	0	3
Animal Husbandry 1	3	0
	20	20

Freshman Year.

Veterinary Science 2	3	3
Veterinary Science 4	3	3
Veterinary Science 5	2	2
Bacteriology 1	3	0
Botany 13	0	3
Chemistry 1	5	5
Dissection	1	1
Drill	1	1
	18	18

Sophomore Year.

Veterinary Science 3	3	3
Veterinary Science 9	2	2
Veterinary Science 6	2	2
Veterinary Science 7	3	3
Zoology 9	3	0
Zoology 2	0	3
Chemistry 2	4	0
Chemistry 7	0	4
Drill	1	1
	18	18

FORESTRY COURSE.

Freshman Year.

	1st Term	2nd Term
English 6.....	3	3
Mathematics 4	5	5
Chemistry 1	5	5
Topographical Drawing	3	0
Botany 12	0	3
Drill	1	1
Library Work	1	1
	18	18

Sophomore Year.

Physics 1	3	3
Forestry 1	5	5
French 1 or German 1	3	3
Drill	1	1
Botany 3	3	0
Botany 4	0	3
Forestry 3	3	3
	18	18

Students enter this course upon completion of the College Preparatory Course. The growing demand for trained rangers and foresters makes this course especially significant. The junior and senior years will be added as soon as students are ready for them. Attention is directed to the winter course in Forestry described elsewhere in this catalogue.

THE SCHOOL OF DOMESTIC SCIENCE AND ARTS.

The courses in Domestic Science and Arts aim to train and broaden the minds of women, and to enable them to meet more intelligently the home demands of modern life. When woman has learned to apply the principles of science to the problems of daily living, she will realize that housekeeping is an occupation worthy of the best efforts of the brightest minds, and that the broadest courses in science, economics, and ethics can be applied to the betterment of home life. Formerly the higher education of woman led her away from the practical interests of the home. The recent establishment of Domestic Science courses in many leading colleges and universities shows a public demand for education toward home life rather than away from it. The State of Utah wisely established such courses when this College was first organized; and the favor with which the work has been received by the public shows the wisdom of the plans. The Domestic Science Course has been strengthened and improved each year, and better facilities for instruction and study have been provided. The four-year course gives the same training in mathematics, in English, and in science as other baccalaureate courses, together with a broader culture in literature and modern languages than is offered in any other. Both in the preliminary work and in the advanced years, special studies in the various lines of home science are prescribed in logical order as the distinctive feature of the course. The Manual Training Course in Domestic Arts is offered for the benefit of young women who do not wish to take the studies of the regular college years, but desire to devote more time to the subjects of especial interest to women.

Two courses are offered: a three-year Manual Training Course, leading to a certificate, and a four-year college course, leading to the degree of Bachelor of Science in Domestic Science. The regular foundation for the latter is the College Preparatory Course.

MANUAL TRAINING COURSE IN DOMESTIC SCIENCE.

First Year.

	1st Term	2nd Term
English 4	5	5
Mathematics 2	5	5
Sewing 1 and 2	3	3
Domestic Arts 1 and 2	3	3
Art 2	2	2
Physical Education	1	1
	19	19

Second Year.

English 5	5	5
Zoology 1	2	2
Art 4	3	0
Botany 2	0	3
Domestic Science 3 and 4	3	3
Sewing 3 and 4	3	3
Physical Education	1	1
	17	17

Third Year.

English 6	3	3
Chemistry 1	5	5
History 2	3	3
Domestic Science 5, 6 and 7	3	3
Sewing 5 and 6	3	3
	17	17

COLLEGE COURSE IN DOMESTIC SCIENCE.

Freshman Year.

	1st Term	2nd Term
English 6	3	3
Domestic Science 5, 6 and 7.....	3	3
Chemistry 1	5	5
Zoology 2	3	3
Mathematics 4	5	5
	19	19

Sophomore Year.

English 7	3	3
German 1 or French 1	3	3
Physics 1	3	3
Botany 3	3	0
Botany 4	0	3
Entomology 1	3	0
Domestic Science 8	0	5
Bacteriology 1	3	0
	18	17

Junior Year.

Domestic Science 9 and 10	3	3
Zoology 5	3	0
Domestic Science 11	0	3
Chemistry 3	3	3
German 2 or French 2	3	3
Electives	5	5
	17	17

Senior Year.

Domestic Science 12	3	3
Domestic Science 13	3	3
Geology 2	3	3
Economics or Sociology	3	3
Electives	5	5
	17	17

THE SCHOOL OF COMMERCE.

The purpose of the School of Commerce is to give opportunity for a liberal education with special emphasis upon the commercial phases of life. Persons who complete the Commercial courses should be better prepared to assume leadership and responsibility in business and in the various industries and professions. Two courses are offered: one of three years, leading to a certificate of graduation; the other of four years, leading to the degree of Bachelor of Science in Commerce. Students in the three-year course may receive a certificate in Accounting, or in Stenography. Those who have finished the three-year course are admitted to the sophomore year as candidates for degrees. The work of the senior year is, to a great extent, elective. The student may select as his major (1) Political Economy, (2) Political Science, or (3) Accounting and Administration. His plan must be approved by the principal of the School of Commerce.

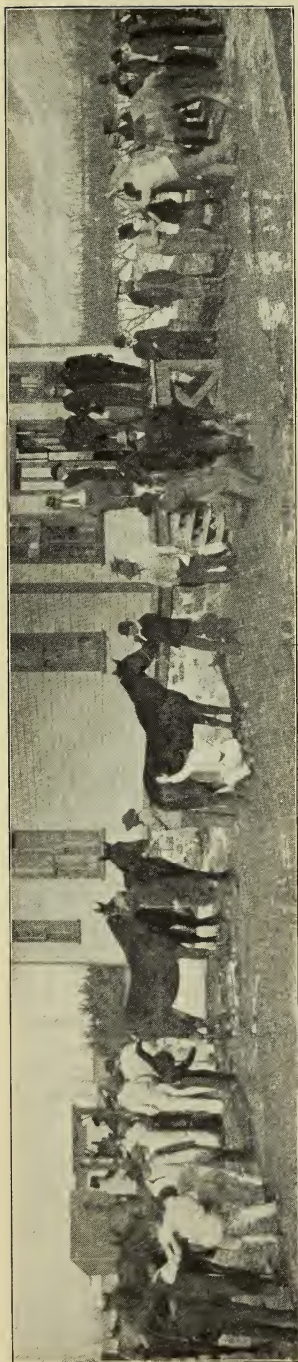
For those who expect to enter the profession of law, the Commercial courses afford excellent preparation. Students who complete these courses will be well prepared for positions as teachers in commercial schools. The demand for thoroughly qualified teachers along this line of work is greater than the supply, and many desirable positions are open to those prepared to do the work.



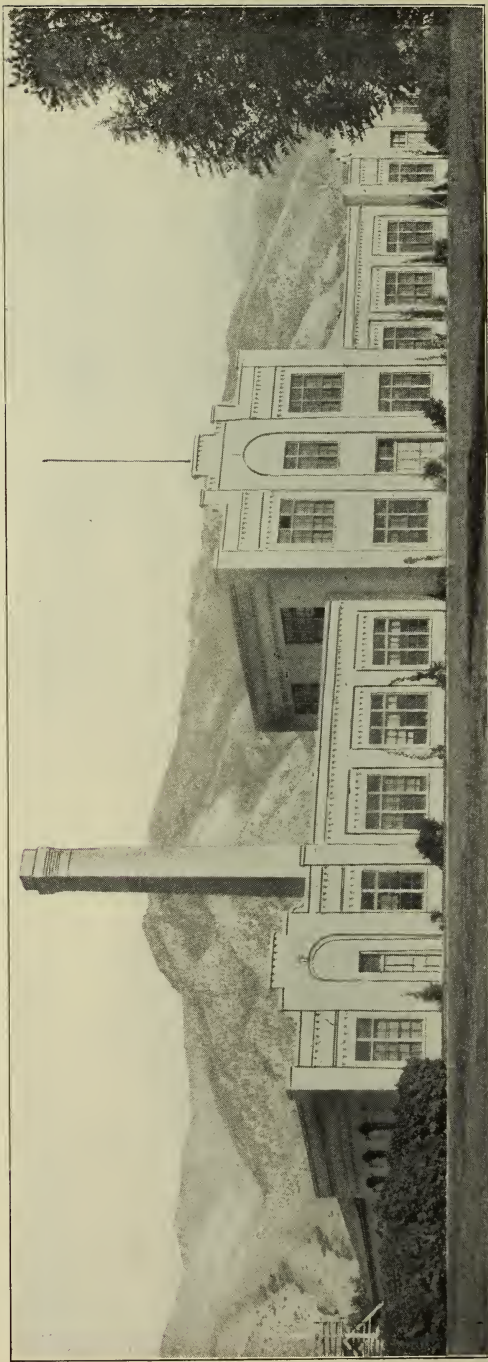
THE BAND.



THE FOOT-BALL TEAM.



THE VETERINARY CLINIC.



SHORT COURSE IN COMMERCE.

First Year.

	1st Term	2nd Term
English 4	5	5
Mathematics 2	5	5
*Government 1	3	3
Accounting and Administration 1	3	3
Commercial Arithmetic	2	2
Penmanship or Typewriting	1	1
	19	19

Second Year.

English 5	5	5
Mathematics 3	5	5
Economics 3 and Accounting 2, or Stenography 1 and Typewriting 2 }	6	6
Zoology 1	2	2
Drill	1	1
	19	19

Third Year.

English 6	3	3
Economic and Commercial Geography	3	3
Economics 11	3	3
Economics 1	3	3
*Accounting and Administration 3	5	5
Drill	1	1
Library Work	1	1
	19	19

*Agricultural subjects may be substituted for these subjects.

COLLEGE COURSE IN COMMERCE.

Freshman Year.

	1st Term	2nd Term
English 6	3	3
Mathematics 4	5	5
Economics 11	3	3
Economics 1	3	3
Accounting and Administration 3 or }	3	3
Stenography 2	3	3
Drill	1	1
	18	18

Sophomore Year.

Chemistry 1	5	5
Physics 1	3	3
Spanish	3	3
Economic and Commercial Geography	3	3
Zoology 2	3	0
Botany 1	0	3
Drill	1	1
	18	18

Junior Year.

English 7	3	3
French 1 or German 1	3	3
Economics 5	3	3
History 4	3	3
Economics 6	3	3
Economics 9	2	2
Drill	1	1
	18	18

Senior Year.

Geology 2	3	3
French 2 or German 2	3	3
Economics 10	3	0
Political Science 3	0	3
Economics 15	3	3
Electives	5	5
	17	17

THE SCHOOL OF MECHANIC ARTS.

The course in Mechanic Arts is intended to qualify students as artisans, hence the practical work of the shops and draughting room is emphasized. The course admits of a three-fold specialization—in woodcraft, forging, or machine work in metals, with special courses in foundry practice, horse-shoeing, carriage building, cabinet making, sloyd, etc. In this work are developed correct methods of using tools and doing the mechanic's work neatly, efficiently and with rigid accuracy. In all departments of the school, work is done from series of shop drawings, arranged in progressive order, giving both the details of the exercise and a drawing of the finished product. Sufficient work is given in English, mathematics, and elementary science to represent a fair high school education. Students electing any branch of the Mechanic Arts Course are required to do at least two years' work in that branch. No machine work is given until the student has shown a reasonable proficiency with hand tools. All products of the shop are the property of the department, students being allowed to take away specimens of their work only by special permission.

The trades have changed greatly in recent years. Science has given them a secure foundation. The wages of artisans have advanced so rapidly as to make the trades desirable as means of livelihood. The lack of skilled artisans should encourage many boys to go into this kind of life work. The work offered by this school is an unusually good preparation for engineering.

Upon completion of the four-year Manual Training course, students receive certificates of graduation.

MANUAL TRAINING COURSE IN MECHANIC ARTS.

First Year.

	1st Term	2nd Term
English 4	5	5
Mathematics 2	5	5
Art 3	3	3
Shop Work	5	5
	18	18

Second Year.

English 5	5	5
Mathematics 3	5	5
Government 1	3	3
Shop Work	5	5
Drill	1	1
	19	19

Third Year.

English 6	3	3
Mathematics 4	5	5
Mechanical Drawing 1a	3	3
Zoology 1	2	2
Shop Work	5	5
Drill	1	1
	19	19

Fourth Year.

Chemistry 1	5	5
Physics 1	3	3
Mechanical Drawing 1b	3	3
Technology 1	2	2
Shop Work	5	5
Drill	1	1
	19	19

THE SCHOOL OF GENERAL SCIENCE.

To carry out the work of the several technical schools of the College, an efficient instructing force and a complete modern equipment have been provided in the natural and physical sciences, as well as in mathematics, history, language, etc. This makes it possible to satisfy the growing demand for strong baccalaureate courses affording a broad general education in the earlier years, and admitting of specialization later, when the student has matured his plans. Such courses constitute the work of the School of General Science, and, paralleling the other degree courses of the College, lead to the degree of Bachelor of Science. The natural introduction to this work is the College Preparatory Course.

Upon completion of four years' work in General Science, students receive the degree of Bachelor of Science in General Science.

COLLEGE COURSE IN GENERAL SCIENCE.

Freshman Year.

	1st Term	2nd Term
English 6	3	3
Mathematics 4	5	5
Physics 1	3	3
Chemistry 1	5	5
Library Work	1	1
Drill	1	1
	18	18

All of the work of the sophomore, junior, and senior years, *except military drill*, is elective; but students are required to complete two years' work in modern languages, and to take an equivalent of five hours through one year in English, of three hours in economics, and of four and one-half hours in zoology and botany. With these restrictions, the whole field of college work lies open, with the understanding that the student will select some one major subject to which to direct his attention, and will group related courses around this, under the direction of the department in which he specializes. For convenience, the subjects offered have been grouped as below, and the requirement is that above the freshman year the student shall complete ten hours of his work in his major subjects, ten hours in subjects found in the same group, and the remainder as he may elect. For graduation, eighteen hours are required in the freshman and sophomore years, and the equivalent of seventeen hours through each of the following years. A subject marked * below cannot become a major in the General Science Course; and as required collateral work, the strictly technical studies are excluded.

Science Group.

*Soil Physics.	*Animal Industry.	Chemistry.
Zoology and Entomology	*Agronomy.	Botany.
Geology and Mineralogy.	*Domestic Science.	*Horticulture.

Mathematical Group.

Mathematics.	Physics.	Chemistry.
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Literary Group.

English.	*Political Economy.	*Political Science
*History.	Languages.	*Commerce.

COLLEGE PREPARATORY COURSE

This course is designed for those who wish to prepare for a college course here or elsewhere. Students who complete it are admitted to the Freshman year in Agriculture, Domestic Science, Commerce, or General Science.

First Year.

	1st Term	2nd Term
English 4	5	5
Mathematics 2	5	5
History 2	3	3
Art 1	2	2
Optionals	4	4
	19	19

OPTIONALS.

Agriculture.

Physiography	2	2
Animal Husbandry 1	3	0
Elementary Agriculture	0	3

Domestic Science.

Physical Education 1	1	1
Domestic Science 1 and 2	3	0
Sewing 7	0	3

Students in Commerce or General Science elect any of the above optionals. *All girls must take Physical Education.*

Second Year.

English 5	5	5
Mathematics 3	5	5
Zoology 1	2	2
Botany 2	0	3
Drill	1	1
Optionals	6	3
	19	19

OPTIONALS.

Agriculture.

Entomology 1	3	0
Irrigation 1	4	0
Veterinary Science 1	0	3

Domestic Science.

Sewing 3 and 4	3	3
Art 3	3	0

Commerce.

History 1 or Modern Languages	3	3
Physiography	3	0

*General Science.**

Modern Languages	3	3
History 1	3	3
Entomology 1	3	0
Botany 2	0	3

*In this course Botany 2 is an optional. Students must elect six hours throughout the year.

Departments of Instruction.

AGRICULTURE.

PROFESSOR BALL.
PROFESSOR NORTHROP.
PROFESSOR FREDERICK.
PROFESSOR JENSEN.
PROFESSOR HOGENSON.
PROFESSOR GOODWIN.
PROFESSOR TITUS.
PROFESSOR CAINE.
PROFESSOR WEST.
PROFESSOR BRAINERD.

ELEMENTARY AGRICULTURE.

This course is devoted to the study of such fundamental questions as: How crops grow, the soil and its elements of plant food, irrigation and the movement of water in the soil and plant, individual crops, etc. The object is to get a general insight into the subject of agriculture and thus build a foundation for future work. A number of simple yet fundamental experiments with soils and plants are carried on by the students. Three hours, second term.

AGRONOMY.

1. SOILS. Lectures and recitations on the origin, formation distribution, character, function and classification of soils; the sources and action of plant foods; alkali soils; the soil water and its movement; soil texture and its maintenance; renovation of worn out soils; the soil atmosphere; the temperature and proper

management of the soil; adaptation of soils and crops; effects of rotation; etc. A number of experiments illustrating the various points discussed are performed by the students in the laboratory. Fletcher, *The Soil*, and King, *The Soil*, are used as reference and text books. Four hours, first term.

2. SOIL PHYSICS. This course includes a thorough study of the total moisture in soils and crops; the capillary rise of water in different soils and plants under different conditions; osmosis and diffusion as affected by cultivation, cropping and mulching; the hygroscopic moisture and its effect upon the water yielding power of soils to plants; the action of lime on soils and plants; the determination of the apparent and absolute specific gravity of soils; the power of loose and compact soils to retain moisture; the rate of percolation of water and air through soils; the effect of subsoiling and various methods of tillage on soil moisture and crop growth; the effect of various depths of mulches, both natural and artificial, upon the conservation of soil moisture; the determination of organic matter in soils and its loss by cropping; the adhesiveness of soils; the effective diameters of soil grains in various types of soils and their relation to plant production; and the manurial requirements of soils as determined by plant growth. These are some of the problems that are discussed in the class room and demonstrated by experiments in the laboratory. King, *Agricultural Physics*. Two laboratory periods and one recitation, first term. Three hours credit.

3. FARM CROPS. Lectures and recitations on the history, production, cultivation, and general management of crops, including cereals, grasses, leguminous plants and root crops. A thorough study of the plant is made, following it through its entire life cycle; the root, stem and leaf development, the composition, care and uses of different farm crops; the improving and adapting of plants to particular needs, systems of rotation, etc. A number of practical tests with different plants are performed by

the students in the laboratory. Hunt, *Cereals in America and Forage and Fiber Crops*. Three hours, second term.

4. ARID FARMING. In this course instruction is given in the methods best adapted to the growing of profitable crops on arid lands: the treatment of the soil, including the conservation of moisture by deep and fall plowing, mulching, etc.; the soils and crops best adapted to arid farming. The experiments being carried on at the different arid experimental farms in the State are discussed, together with other problems which confront the arid farmer of today. Three hours, first term.

5. MANURES AND AGRONOMICAL BACTERIOLOGY. Students become familiar with the various natural and artificial manures best suited for different crops, their composition, economical use and influence upon the soil and crop. The care and preservation of manures is discussed. The manurial requirements of different soils are studied by means of plat work on the farm and pot or basket cultures in the plant house. Voorhees, *Fertilizers*, is used as a reference book. The bacteria which affect soil fertility, including the nitrifying and denitrifying organisms, the nodule-forming bacteria of legumes, are discussed in the class room and experimented with in the laboratory. Elective. Three hours a week during one term.

6. HISTORY OF AGRICULTURE; FARM MANAGEMENT. A series of lectures covering the general progress of agriculture in those nations which have contributed most to agricultural development; the various systems of farming; the economic use of labor and machinery; harvesting and disposing of crops; and other problems of the farm. Card, *Farm Management*. Elective. Three hours a week during one term.

7. INVESTIGATION AND EXPERIMENTATION. A study of the history, organization and work of the U. S. Department of Agriculture and Experiment Stations. Students become familiar with the experimenters and agricultural literature of this and other countries. Abstracts are made of a number of bulletins, bearing

on various lines of work. An original experiment is outlined, brought before the class for criticism and suggestions, performed, and written up by the student. Five hours, second term.

8. SEEDS. Judging of wheat, oats, barley, corn, potatoes, etc.; a study of market grades. The quality and preservation of seeds, shrinkage, vitality, germination, methods and depth of seeding; weeds and weed seeds, their identification and methods of eradication; smuts of oats and wheat, blight, scab, and rot of potatoes: the cause and prevention; causes of killing of winter grains, etc. Class room, laboratory, and field work. Elective. Three hours, first term.

ANIMAL HUSBANDRY.

1. MARKET TYPES. The judging of market types of horses, beef cattle, sheep and swine. Some score card practice will be given, but most of the work will be comparative judging of groups of animals. Three hours, first term.

2. BREED TYPES. This course covers the origin, history, and characteristics of the different breeds of horses, cattle, sheep and swine, especial stress being laid upon their adaptability to western conditions. In addition instruction is given in the judging of representatives of different breeds, according to their official standard. Three hours, second term.

3. ANIMAL NUTRITION. A brief study of the anatomy and physiology of the digestive system, and the purpose of nutrition. The theory and practice of feeding, with special reference to Utah's conditions as to feed, climate, etc., are taken up. Five hours, first term.

4. PRINCIPLES OF BREEDING. A study of the laws of heredity, correlation, reversion, variation, and fecundity, and of the methods of breeding, cross-breeding, in-and-in breeding, and se-

lection. In addition, special study will be given to the methods of celebrated breeders. Three hours, first term.

5. LIVESTOCK MANAGEMENT AND HERD BOOK STUDY. The housing, care and management of the different classes of livestock, followed by a study of the various herd books and the pedigrees of noted individuals of the important breeds. Elective. Three hours, second term.

6. ADVANCED STOCK JUDGING. A course in the judging of groups of animals of all classes. It takes up the work done at fairs, and prepares students for real judging in the ring. Elective. Prerequisites, Animal Husbandry 1 and 2. Two hours, first term.

7. PRACTICAL FEEDING. This course is a combination of many of the principles of courses in feeding and management, and will be wholly practical. Some time will be given to the laws of nutrition, the balancing of rations, and the care and management of all classes of livestock. Three hours, first term.

8. POULTRY CRAFT. A series of lectures, supplemented by practical work with fowls. Each student will take up actual work of artificial incubation and brooding, crate-fattening of fowls, and the practical management of a modern poultry plant by actual experience in the several operations. Plans and specifications for different types of poultry houses and for an entire plant will be prepared. Two hours, second term.

DAIRYING.

1. GENERAL FARM DAIRYING. This course is largely a combination of the most essential things embodied under Dairying two and three. Two hours, first term.

2. FARM DAIRY PRODUCTS. A study of milk: its secretion, physical, and chemical properties, uses, comparative economy in disposing and utilizing for various purposes on the farm; of testing for fat, acid and common adulterations; of the effects of

germs and degree of purity on dairy products; of separating and handling milk and cream, and manufacturing butter and cheese on the farm. Two lectures and one laboratory period, second term. Two hours credit.

3. INSPECTING AND TESTING DAIRY PRODUCTS. A thorough study of the Babcock test for fat, and one of the tests for determining acidity of dairy products; of the influence and detection of different preservatives and adulterations, and a study of the various dairy pure food standards. Students taking this course should have had one term's work in chemistry. Two lectures and one laboratory period, second term. Two hours credit.

4. ADVANCED DAIRYING. The various methods of improving and building up a dairy herd; methods of weighing, testing and recording the milk produced by each cow; the extent to which dairy farming is practiced, and under what conditions it may be adopted; dairy farming as an independent business, and as an adjunct to general farming; and the arrangement and construction of dairy farm buildings, stalls, yards, etc. Prerequisites, Animal Husbandry 3 and 4. Two lectures and one laboratory period. Three hours credit.

5. OPERATION OF CREAMERIES AND CHEESE FACTORIES. A study of the receiving, sampling and separation of milk, the preparation and use of starters, ripening of cream, principles of churning, salting, working, packing and marketing butter. This course includes a study of milk as applied to the manufacture of soft and hard cheese, the principles involved in the setting, cutting, heating, milling, salting, pressing, curing and marketing of cheese. Attention will be given to the organization, location, construction, drainage and ventilation of creameries and cheese factories; the economic disposal of factory by-products and various methods of factory refrigeration. Elective. Prerequisite, Dairying 2. Three lectures and two laboratory periods. Five hours credit.

6. **DAIRY TECHNOLOGY.** This course treats of the utilization of milk and its products outside of the scope ordinarily considered under dairying. It embraces such subjects as value of milk as a food; the preparation of certified, modified, standardized, fermented, and condensed milk; the manufacture of casein, milk ivory, milk sugar, renovated butter and oleomargarine. Elective. Prerequisites, Chemistry and Bacteriology. Two hours credit.

7. **RESEARCH WORK.** A study of various important dairy subjects; a digest of recent dairy work of the Experiment Stations; comparative dairying as practiced in leading dairy countries. A reading knowledge of German is desirable. Elective. Three hours credit.

8. **DAIRY PRACTICE.** The College has a practical creamery and cheese factory in operation every day except Sundays. Students who specialize in dairying and need practical experience should take this course. Arrangements can be made to do this practical creamery work at almost any time during the day. Elective. Five hours credit.

ECONOMIC ENTOMOLOGY.

1. **ECONOMIC ENTOMOLOGY.** A series of lectures on the principal injurious and beneficial insects of the intermountain region. Life-histories of insects are discussed and the different stages studied. The student will become familiar with the use of spraying apparatus and the preparation of spraying mixtures and other insecticides, and with general remedial and cultural methods. Two recitations and one laboratory period first term. Three credits.

2. **GENERAL ENTOMOLOGY.** A general knowledge of structure, habits, and classification of insects with methods of preparation for study, will be given in this course. A properly mounted, labeled and classified collection will be required of each student.

Two recitations and one laboratory period throughout the year. Three credits.

3. ADVANCED ENTOMOLOGY. Lectures relating to classification and distribution of insects with especial attention to the local fauna and their relations as beneficial and injurious species. Prerequisite, course 1 or 2. Elective. 3 or 5 credits.

4. ENTOMOLOGICAL LITERATURE. Designed for students taking advanced work in Entomology. Bulletins and reports dealing with the subject are examined; the history of economic entomology, and the preparation of papers relating to economic problems receive attention. Prerequisite, course 1 or 2. Elective. 3 or 5 credits.

FORESTRY.

1. SILVICULTURE. Treats of the characteristics of forests, species of trees important in forestry, methods of propagation, seed collecting, nursery practice, forest and field planting. Five hours throughout the year.

2. TOPOGRAPHIC DRAWING AND MAPPING. Practice with drawing instruments in the making of topographical maps, and drawings in ink and water colors. Nine hours, first term. Three credits.

3. SURVEYING. Field and office work on a variety of practical problems in the use of the engineer's transit and level; special attention is given to methods of computation, reports and mapping of the data collected in the field. Three credits. throughout the year.

HORTICULTURE.

1. POMOLOGY. This course deals with the theory and practice of fruit growing. Such practical questions as the fol-

lowing are carefully considered: selection of site for an orchard, with reference to the soil, exposure, markets and general climatic conditions; planting and laying out an orchard; profitable varieties; the general care and management, including such subjects as cultivation, irrigation, pruning and spraying. The systematic aspects of the subject receive careful attention. The description and identification of all species and varieties obtainable constitute part of the work. The origin and classification of cultivated fruits are thoroughly reviewed. Bulletins from various Experiment Station, and pomological records are studied. Reference works: Thomas, *American Fruit Culturist*; Bailey, *Principles of Fruit Growing*; Card, *Bush Fruits*; Budd and Hansen, *Systematic Pomology*. Three hours throughout the year.

2. GARDENING. The course treats the subject from the standpoints listed below.

(a). Olericulture (Vegetable Gardening.) The origin, history and botanical relationships of garden vegetables; soil, fertilizers and general cultivation; planting, transplanting, rotating, harvesting, storing, and marketing crops. Bailey, *Principles of Vegetable Gardening*.

(b). Landscape Gardening. A study of the principles governing the laying out of walks and drives, making of lawns, planting of shrubbery, designing of beds and borders,—in short, everything relating to the ornamentation of the home grounds. The college campus and greenhouses give students ample opportunity to become familiar with ornamental plants. Excellent reference works are in the library. Four hours, second term.

3. PLANT BREEDING. This course gives a more thorough knowledge of the principles underlying the improvement of plants. The opinions of the leading scientists are studied in relation to variation, heredity, hybridization, etc. Four hours, first term.

4. EVOLUTION OF PLANTS. Following Plant Breeding as a sequel, is given this course, dealing with the evolution of plants. Particular attention is given to the origin and domestication of those commonly cultivated. Four hours a week, second term.

5. INVESTIGATION. Seniors in Horticulture and Entomology are allowed to carry on investigations along the lines in which they have special interest. Two laboratory periods a week, one credit hour. Elective throughout the year to advanced students in Horticulture.

6. LANDSCAPE DESIGNING. A study of ornamental plants and methods of grouping the same in laying out public grounds, parks, etc. Students are required to submit plans showing the application of principles studied in certain problems. Elective, spring term. Three hours credit.

7. HORTICULTURAL LITERATURE. A critical study and examination of books, bulletins, reports, etc., dealing with horticultural subjects. Elective. Time and credit to be arranged with the instructor.

8. ADVANCED POMOLOGY. To students who desire to elect advanced work in Pomology, certain problems dealing strictly with the raising and handling of fruits will be assigned for careful study. Credit and time to be arranged with the instructor.

IRRIGATION AND DRAINAGE.

The law which prohibits the College from giving degrees in engineering, also prohibits the University of Utah from giving instruction in irrigation. This eliminates from both schools the possibility of training young men for irrigation engineering—one of the most vital branches of engineering in the West. To meet this unfortunate condition the State School of Mines and the

Agricultural College offer, jointly, a course leading to the degree of Bachelor of Science in Irrigation Engineering. The first years of this course are given by the Agricultural College, and are identical with the college course in Irrigation and Drainage. The last two years, which deal almost wholly with the technical work in engineering, are given by the School of Mines at Salt Lake City.

1. FARM IRRIGATION AND DRAINAGE. This course is designed especially to meet the requirements of the student who can spend but a limited time in this subject. Lectures are given on field irrigation and methods of farm drainage. Field excursions are made to farms which are being drained and the practical side of the work is emphasized. Four hours, first term.

2. SOILS AND WATER. The effect of the soil and moisture environment upon plant production and the economic use of irrigation water. Three hours, throughout the year.

3. FARM DRAINAGE. A general treatment of the subject of drainage of lands in the arid section with special reference to laying out and constructing various kinds of under drains. Three hours, second term.

4. IRRIGATION. This course is designed to meet the practical problems encountered in the operation of canal systems, including sources of supply and methods of securing and improving such supplies. Particular reference is made to canal management, methods of measuring and dividing water and preventing seepage losses.

5. IRRIGATION. Laboratory work to supplement lectures and field work in water measurements, drain tile making, etc. Three laboratory periods. Three hours, first term.

6. IRRIGATION. This course includes surveys for farm and

district drainage systems, with estimates of cost, and a study of the best system of operation to meet various conditions. State and Federal laws relating to irrigation and drainage, including methods of appropriating water and forming irrigation and drainage districts, are studied. Three hours, throughout the year.

7. IRRIGATION. This course includes special investigations in connection with the Experiment Station work in irrigation or drainage.

VETERINARY MEDICINE.

The Board of Trustees recently authorized the first two years work of a course in Veterinary Medicine to be offered by the College. Two years more will be offered later, making a four-year College course, leading to the degree of Doctor of Veterinary Medicine, D. V. M.

The department aims to provide a thorough education in all that pertains to veterinary medicine, and the course will be equal to any offered in this branch of the natural sciences. At every step the student is drilled in all the practical and technical details of the profession, a broad foundation being laid at the outset to enable him to take a comprehensive view of the subject. In the beginning of the course he is shown the relations between the three great kingdoms of nature—animal, vegetable, and mineral—and the biological and chemical forces that govern them, especially their application to animal life. With an understanding of the life and growth of the normal animal, the student is introduced to the various influences which mar or disturb this condition, such as environment, use, climatic conditions, and vegetable (bacteria and fungi) and animal parasites. The alterations produced in the tissues of the normal animal by these agencies, the disturbance of function which they cause, and the

power of medicines and surgical interference to afford relief, are studied in detail. The relations existing between disease in animals and in man, and the several avenues of transmission are given proper attention, and in the end the student is fitted not only to deal with the ordinary problems presented in veterinary practice, but also to work out the complex and strange conditions so frequently met.

The treatment of sick and disabled animals is only a small part of the modern veterinarian's work; in fact, it is in the line of preventative medicine that he is able to render the most valuable service, and the course is designed to prepare him to enter upon any part of this broad field of labor. The class room work is supplemented by practical work in hospital and clinics, and by systematic courses in laboratories.

The veterinary hospital and the free clinics furnish abundant opportunity and material for practical work. Situated in an extensive stock-growing district, the College is especially favored, many horses and other domestic animals being brought to the clinics and the hospital for treatment. During this course, opportunity is afforded to witness nearly all the operations performed in veterinary surgery, together with the methods of treating the internal diseases.

Students of Veterinary Medicine have the benefits of all the facilities offered by the numerous departments of the College, wherever these may be utilized to their advantage. Specially equipped laboratories afford excellent opportunity for the study of anatomy, histology, pathology, chemistry, botany, and the related sciences. The students have access to a very extensive library.

REQUIREMENTS FOR ADMISSION.

Candidates for the degree of D. V. M., having a college degree, a teacher's first grade certificate, diploma from an accredited High School, or having passed successfully the entrance re-

quirements of a recognized college, will be admitted without an examination. Other candidates for admission will be required to pass or take the Preparatory Veterinary Course, and to show other evidence of sufficient ability to follow with profit the instruction offered.

VETERINARY SCIENCE.

1. GENERAL COURSE IN VETERINARY ELEMENTS. This course considers briefly elementary anatomy and physiology and the common ailments of domestic animals; the most prevalent contagious diseases, their causes, symptoms, course, diagnosis and treatment; measures for their prevention and cure. The course is taught by lectures and text books, and illustrated by observation and practice in the free clinics held each week. The aim is to teach the student how to care for and treat the animals on the farm. Three hours, second term.

2 and 3. COMPARATIVE ANATOMY OF THE DOMESTIC ANIMALS. This subject is studied through the entire freshman and sophomore years, and embraces descriptive and practical anatomy. A series of lectures, including the study of the bones, articulations, muscles, circulatory apparatus, the nervous system, the respiratory system, and the organs of digestion, the urino-genital apparatus, and the organs of special sense covers the subject of descriptive anatomy. The lectures will be supplemented by demonstrations from mounted skeletons, prepared specimens and charts. Practical anatomy comprises a comprehensive and thorough course in dissection. Each year the student is required to make two complete dissections of the horse and such parts of other animals as may be deemed necessary. Freshmen will devote their time in the dissecting room to the study of the bones, articulations and muscles. Sophomores will make special dissection of the nervous system, circulatory apparatus, lymphatic glands, organs of special sense, and the organs of the thoracic and abdominal cavities. Each

student is required to dissect, and pass an examination on the part assigned before passing to the dissection of another part. Three hours throughout the two years.

4. **PHYSIOLOGY.** The course in Physiology consists of lectures, and demonstrations studied by the comparative method, the vital functions of the different species of the domestic animals and those of the human body being compared. A study of the physical and chemical laws as they are related to physiology, and the general properties of animal cells, their origin, development and growth, occupies the first term, and the special physiology of the various organs and tissues of the animal body is studied during the second term. Three hours throughout the year.

5. **HISTOLOGY.** See Zoology 5 for a description of this course.

6. **MATERIA MEDICA.** The subject is taught by a systematic course of lectures. The student is made acquainted with the different drugs and preparations, and their leading properties. The study includes all the preparations used in Veterinary Therapeutics, botanical name, natural order, habitat, description of the properties, method of preparation, adulterations, names of the therapeutic actions, preparations official in the United States Pharmacopœia. Two hours throughout the year.

7. **GENERAL PATHOLOGY.** This treats of the causes of disease, its spread and generalization, the protecting and healing forces, disturbances of circulation and nutrition, hypertrophy and regeneration, inflammation and tumors; the general technique of laboratory diagnosis. Two recitations and one laboratory period throughout the year. Three hours credit.

8. **CLINICS.** Free clinics will be held at the hospital, and all students taking any of the courses in Veterinary Science are required to attend and assist in the work. It consists of free ex-

amination and treatment of the numerous cases brought in, representing all diseases common to this section of country and furnishing the clinic with abundant material for observation and actual application of the work of the class room.

9. PHARMACY. A study of official drugs and preparations, consideration of weights and measures, specific gravity, percentage solution, crystallization, dialysis, extraction, percolation, incompatibility, and classification; also the appearance, taste, color, odor and habitat of crude drugs and chemicals, with their Latin and English names. Each student is required to prepare some of the common official preparations and to compound prescriptions. Two hours throughout the year.

AGRICULTURAL TECHNOLOGY.

1. MECHANICAL DRAWING. The course includes instruction in the elementary principles of mechanical and free hand drawing, with practice in the use and care of drawing instruments. Six hours, first term. Two credits.

2. PLANE SURVEYING. The general methods of plane and topographic surveying and the use, care and adjustment of instruments. The field work is adapted to the requirements of the agriculturist in irrigation, drainage and land surveying. Two hours, second term.

3. FARM MECHANICS. This course deals with the tools and machinery of the farm, their development, design, construction, operation, draft, durability and care. This includes a study of steam and gasoline engines. Three hours, second term.

4. RURAL ENGINEERING. The principles of rural road construction; arrangement, cost and design of farm buildings; fences, gates and material for their construction; the laying out of the farm and related problems. Three hours, first term.

5. **HYDRAULICS.** This course will meet the wants of the agriculturist rather than the requirements of the engineer. The flow of water in natural and artificial open channels, in pipes and flumes; the elementary laws of liquids in motion and at rest, and the elementary principles of water power development. Five hours throughout the year.

6. **ROAD CONSTRUCTION.** Such questions as establishing the grade, drainage, and roadbed; road materials, including different kinds of earth, gravel and stones; the slope of the road surface; rock crushing, rolling, etc. The cost of building different kinds of roads and the proper manner of doing the various operations economically, will be fully discussed. Elective. Prerequisites, surveying and mechanical drawing. Five hours, first term.

7. **ROAD MAINTENANCE.** The effect of the width of tires upon the road, keeping of the road in proper form, the adding of materials to worn surfaces, the keeping of the drainage channels clean, employment of labor on the roads, cost of maintenance, etc. Elective. Prerequisites, surveying and mechanical drawing. Five hours, second term.

DOMESTIC SCIENCE AND ARTS.

ASSOCIATE PROFESSOR COOPER.

ASSISTANT PROFESSOR COOK.

MISS VIBRANS.

MISS POWELL.

MISS LOVE.

MISS CROOKSTON.

1. FOODS. A study of the following topics: The processes of cooking as applied to meats and vegetables, including fruit preservation, cleansing kitchen utensils,—silver, china, glass, and linen. Williams and Fisher, *Theory and Practice of Cooking*. One lecture and two laboratory periods, first term.

2. HOME SANITATION. Location and surroundings of city and country residences from the sanitary standpoint; a study of different systems of lighting, heating and ventilating. Elliot, *Household Hygiene*. Three hours, second term.

3. HOME CONSTRUCTION AND HOUSEHOLD MANAGEMENT. A study of house plans and buildings; the arrangement of household affairs to economize money, time and strength. Terrill, *Household Management*. Three hours, first term.

4. HOME AND SOCIETY. A study of civic problems and the part women should play in their solution. Three hours, second term.

5. FOODS. A study of fruits, vegetables and meats—their food value and cost; balancing of menus; preparing and serving meals with a given sum of money. A three-course dinner is served daily through the winter months. Students plan the menu, do the marketing, prepare and serve a high tea and a chafing-dish luncheon. Norton, *Foods and Dietetics*. One lecture and two laboratory periods.

6. HOME CARE OF THE SICK. The aim of this course is to teach the student how to meet emergencies, and prevent the spread of contagious diseases. Practical work is given in invalid cooking, bandaging, bed-making and care of sick room. Pope, *Home Care of the Sick*. One lecture and two laboratory periods.

7. LAUNDERING. A study of washing materials and their effect on various fabrics; the hygiene and aesthetic value of clean, well-ironed clothing. Vail, *Laundry Manual*. One lecture and two laboratory periods.

8. HOME CONSTRUCTION AND SANITATION. A study of the situation and surrounding of the house, construction and furnishing with cost, heating, lighting and ventilating, disposal of waste and use of antiseptics for cleansing purposes. Five hours a week, second term.

9. FOODS. EXPERIMENTAL COOKING. Designed to meet the needs of the teacher and to lay the foundation for all cooking. The aim of the work is to lead the student to see what cooking processes give best results in retaining nutritive principles in the most digestible form. One lecture and two laboratory periods a week.

10. HOME NURSING. Emergencies, care of children and the sick room. Affords training for teaching the subject in elementary and high schools. One lecture and two laboratory periods a week.

11. FOODS. HUMAN NUTRITION. Diets with cost are worked out for infants, children, adults, and the aged. Three hours a week.

12. HOUSEHOLD ECONOMICS. Study of the home organization, methods of housekeeping, household accounts, work and domestic service. Three hours a week throughout the year.

13. THEORY AND PRACTICE OF TEACHING DOMESTIC SCIENCE. Study of Domestic Science from the educational stand-

point. Students plan courses and equipment with cost, and do the actual teaching. Three hours a week throughout the year.

14. **FOODS. DEMONSTRATION.** Training in giving demonstration lectures for students who wish to prepare for Farmers Institute work, etc. Elective.

15. **CAMP COOKERY.** The aim of the course is to give a general knowledge of the underlying principles of cooking and their application to foods that are used in camp life; the study of cooking processes best adapted to camp conveniences; the planning of outfits for camp comfort. Elective.

SEWING.

1. **HAND AND MACHINE MODELS.** The student makes a set of models covering the full course in hand and machine sewing. Talks are given on the position of the body and care of the eyes while sewing, on color and on the nature and manufacture of materials used. Eight hours, first term. Three credits.

2. **PLAIN SEWING.** The student is taught to cut, fit and make a suit of underwear, a shirtwaist and a dress of wash material, from patterns made according to the system used throughout the course. Eight hours, second term. Three credits.

3. **DRESSMAKING.** Includes draughting from measurements, patterns for waists, skirts, sleeves, etc.; practice in cutting and basting; also cutting, fitting and finishing a worsted dress and fancy waist. Eight hours, first term. Three credits.

4. **FRENCH MODELING, DESIGNING, CUTTING AND FITTING.** A study of grace in design of costume and harmony of color. Further practice in pattern-making, cutting and fitting. Eight hours, second term. Three credits.

5. **ADVANCED DRESSMAKING, HISTORY OF COSTUME.** Practical costume making, cutting, basting, fitting, pressing, trimming

and finishing, draughting from measurements patterns for waists, skirts, sleeves, princess gowns, jackets, coats, etc, supplemented by a study of the covering for the body, materials from which it is made, and the important changes in costume from pre-historic times to the nineteenth century. Eight hours, first term. Three credits.

6. ART NEEDLE WORK. This consists of hemstitching, drawn work, Kensington embroidery, Roman cut work, jeweled embroidery, Mount Mellick embroidery, Hardanger work, and modern lace making. Eight hours, first term. Three credits.

7. HAND STITCHES AND MACHINE WORK. The student makes a set of models, covering the full course in hand sewing, and involving practice in basting, overhanding, overcasting, etc. Talks are given on the position of the body and care of the eyes while sewing, on color, and on the nature and manufacture of materials used. The student is taught the use and care of various machines. Regular practice is given in running, hemming, felling, etc. Drawers, skirt, and underwaist are cut and made. Ten hours, second term.

8. MACHINE WORK. The students are taught to adapt and use patterns, to cut, fit, and finish a dress of wash material, and to cut, fit, hang and finish one lined skirt of worsted material. Five hours, first term.

9. DRESSMAKING. This course includes plain draughting from measurements, practice in cutting and basting, and cutting, fitting, and finishing one fancy waist. Five hours, second term.

COMMERCE.

PROFESSOR THOMAS.

ASSISTANT PROFESSOR STEPHENS.

ASSISTANT PROFESSOR GODDARD.

ECONOMICS.

1. ELEMENTS OF ECONOMICS. This course endeavors to explain the laws of man's economic activity. It is, therefore, the basis for a scientific understanding of industrial conditions. Some of the topics studied are: Economic wants, value, rent, wages, profits, interest, etc. Three hours throughout the year.

2. AGRICULTURAL ECONOMICS. The first part of this course will be similar to Economics 1, but the second term will be devoted chiefly to a study of the agricultural conditions of the United States and particularly the Rocky Mountain Region. Three hours throughout the year.

3. HISTORY OF COMMERCE. The development in Egypt, Greece, Rome, Florence, Medieval Europe, etc., down to and including the commercial nations of modern times. Special attention is given to materials and machinery of commerce, to trade routes, and to the relations between commercial development and other branches of the history of civilization. Three hours throughout the year.

4. ELEMENTS OF SOCIOLOGY. A general course in the foundations and principles of sociology. It includes a careful study of the social origins, social structure, and social activities. Three hours throughout the year.

5. MONEY AND BANKING. Forms and laws of money; the money question; credit and banking; the money market and foreign exchanges. Three hours throughout the year.

6. PUBLIC AND CORPORATION FINANCE. A course dealing chiefly with the principles underlying public and corporative expenditures, incomes, debts, and administration. Three hours throughout the year.

7. TAXATION. A study of the methods of federal and state taxation, including the customs and internal revenue duties, direct income, business and inheritance taxes, and general property and corporation taxes. Three hours, second term.

8. ECONOMIC AND COMMERCIAL GEOGRAPHY. Economic and Commercial Geography of the United States; resources and leading industries of the different sections of the country with special reference to the Rocky Mountain States; basis of our foreign trade shown by the resources of different nations. Three hours throughout the year.

9. MARKETING OF PRODUCTS. The methods now practiced in the organization of the selling branch of industrial and merchandising business. The principal subjects in this field are: publicity agency, advertising, forms and correspondence, credits and discounts. Two hours throughout the year.

10. RAILWAY TRANSPORTATION AND PRACTICE. The development of the railway system, railway finance, railway statistics; the theory of rates, methods of public control in Europe, Australia, and America. Three hours, first term.

11. INDUSTRIAL AND COMMERCIAL LAW. A study of the elementary principles of law relating to common business transactions, including contracts, sales, promissory notes and bills of exchange, contracts of common carriers, agency, partnership and corporations. Three hours throughout the year.

15. A research course in Economics.

POLITICAL SCIENCE.

1. GOVERNMENT. Our European ancestors, origin of states and state institutions, English and American governments compared, state and foreign service, the treasury, money and coinage, banks, the post office, the executive departments, legislation, the constitution, federal and state powers, political parties, party issues, etc. Three hours throughout the year.

2. (a) CONSTITUTIONAL LAW. The Constitution; the rise of the American Union; distribution and powers of the government; powers of Congress; powers of the Executive; the judicial departments; checks and balances of governments; government of the territory; the admission of new states; amendments to the constitution; civil rights and their guarantees; protection of persons accused of crime; protection of contracts and property, etc.

(b) INTERNATIONAL LAW. Persons concerned, rights and duties of state, territorial jurisdiction, jurisdiction on high seas, agents of the state nationality, treaties, settlement of disputes, war and its effects, military occupation, hostilities, neutrality, contraband, blockade, etc. Elective. Three hours throughout the year.

3. COMPARATIVE STUDY OF GOVERNMENTS. A comparative study of the various systems of government,—Greece, Rome, Great Britain, Germany, France, Switzerland, United States, etc. Three hours, second term.

ACCOUNTING AND ADMINISTRATION.

1. (a) THEORY OF ACCOUNTS. The law of debit and credit, illustrated by correspondence with offices; practice in ruling, checking, construction of balance sheets; practice in letter writing, making out bills, invoices, receipts, bills of lading, legal forms, etc.

(b) COMMERCIAL ARITHMETIC. In connection with the Theory of Accounts much stress will be laid on rapid methods of

commercial calculations. Short methods, not usually emphasized in the regular courses, in the fundamental operations, interest, discount, etc., will receive special attention. Five hours a week throughout the year. Three or five credits.

2. PRACTICAL ACCOUNTING AND BUSINESS PRACTICE. A thorough and complete course in all the essentials of accounting as practiced in modern business houses. Great stress will be laid on correspondence and construction of legal and commercial papers. Five budgets must be prepared by each student during each term. A portion of each period will be devoted to rapid calculation. Inter-communication business is carried on between fellow-students and commercial schools in the leading lines of business, affording excellent drill in correspondence and office practice. Two hours daily throughout the year. Three or five credits.

3. ADVANCED ACCOUNTING AND BUSINESS MANAGEMENT.

(a) Corporation accounting and auditing. A practical application of previous courses in accounting as applied to corporation accounting. Manufacturing, railroading, and merchandising receive special attention.

(b) A thorough study of bank accounting and auditing. Various systems are studied and compared. Office practice and inter-communication work similar to that described under Accounting 2 form a part of this course. The college maintains completely equipped offices in banking, transportation, real estate, brokerage, commission, retailing, and wholesaling. When all the theoretical work and the business practice is completed, the student is placed as manager of one of these offices and is held responsible for all its operations. Each student must pass through at least three offices during the year. Five budgets similar to those described under Accounting 2 are required each term. Two hours daily. Three or five credits.

STENOGRAPHY.

1. STENOGRAPHY I. This is a thorough, practical course, designed for the two-fold purpose of preparing the student for amanuensis work and laying a foundation for the more advanced work or rapid reporting. After the principles of the text are mastered, the dictation of various forms of commercial correspondence is taken up. Graham's Phonography, one of the most successful of the many excellent Pitmanic systems, is taught. Five hours throughout the year. Four hours credit.

2. STENOGRAPHY II. After a thorough review of the text books, advanced correspondence work, legal documents, speeches, specifications, editorial matter, court testimony, etc., are taken up. This course is designed especially for students who desire to qualify for the United States Civil Service, or for reporting work. A study of public meetings, court procedure, and reporting of public meetings, and trials in Logan and vicinity. Much transcribing on the typewriter is required. Five hours throughout the year. Three hours credit.

TYPEWRITING.

1. TYPEWRITING I. Beginning with simple exercises, the student learns correct fingering and the proper manipulation of the typewriter. Special attention is given to the care and mechanism of the machine. Five hours a week throughout the year. One hour credit.

2. TYPEWRITING II. A special course for those taking Stenography. In addition to the elementary principles given in Typewriting I, students make copies of correctly written correspondence, legal forms, etc.; also personal composition and dictation. As soon as moderate speed is attained, the work includes transcription of shorthand notes. One hour daily throughout the year. Two hours credit.

PENMANSHIP.

1. This course aims to develop a practical handwriting. Much stress is laid on movement, position of hand and body, etc. Beginning with easy movement drills, the student is led into more difficult exercises, completing with words and short sentences. Designed for first year students and for Winter Course students. Five hours a week throughout the year. Two hours credit.

SPECIAL LECTURES.

A series of about ten lectures on practical business subjects will be given during the year by prominent business men throughout the state. All Commercial students are expected to attend these lectures.

MECHANIC ARTS.

PROFESSOR JENSEN,
MR. HANSEN,
MR. PULLEY,
MR. NEWAY,
MR. THATCHER,
MR. FREW,
MR. MADSEN.

TECHNOLOGY.

1. The properties and characteristics of the materials used in construction; its preparation for use; tests of the strength and quality of materials; their preservation, etc. In addition to the usual tests of materials, tests are made of chains and welded bars of iron, of the force required to drive various kinds of nails, of the holding power of nails and screws, etc. Two hours credit throughout the year.

MECHANICAL DRAWING.

1. (a) MECHANICAL DRAWING. This course consists of a thorough drill in the elementary principles of projection, including linear perspective and the more common conventions of mechanical drawing. Prerequisite, Art 1, 2 or 3. Nine hours throughout the year. Three hours credit.

(b) DRAWING AND DESIGN. The work is adapted to the line of shop work which the student is pursuing. It is intended to give practice in design with consideration of proper proportion for strength as well as for aesthetic qualities. The student is expected to make his own designs for his work in the shops. Prerequisite, Art 2 and Mechanical Drawing 1 (a). Nine hours throughout the year. Three hours credit.

CARPENTRY.

1. (a) Rudimentary exercises in sawing, ripping, planing, mortising, dovetailing, and general joinery, and the application of these to simple articles of furniture. Correct methods of using and handling tools are emphasized. Fifteen hours, first term. Five hours credit.

(b) Sharpening and adjusting of carpenters' tools, and saw filing, followed by practice in making panels, doors, and sashes, and in simple cabinet work. Fifteen hours, second term. Five hours credit.

2. (a) Plain cabinet making, concluding with the construction of a model carpenter's work bench. First term.

(b) Wood turning and other machine work in wood and the construction of a standard carpenter's tool chest. Second term. Prerequisite, course 1 (b).

Fifteen hours throughout the year. Five hours credit.

3. The principles and practice gained in the foregoing courses are applied to frame house building. If possible, practice in building a regular house is given, but when such opportunity cannot be had, special parts, such as a section of wall, including doors and windows, hips and valleys in roofs, etc., are built in the shops. Prerequisite, course 2, but students desiring to specialize in house-building may be permitted to take this course at an earlier date. Fifteen hours throughout the year. Five hours credit.

5. A series of selected exercises from courses 1 (a) and 2 (b). Six hours, first term. Two credits.

FORGING AND CARRIAGE BUILDING.

1. (a) Preliminary exercises, such as drawing, bending, twisting, and shaping, followed by exercises in iron welding, making tongs, and other forge tools. Accuracy in methods and results is insisted upon. First term.

(b). Practice in steel and iron welds, and general work in steel forging and dressing. Chisels, punches, reamers, hammers, wrenches, andirons, and ornamental gates, etc., are sample exercises. Second term. Prerequisite, course 1 (a).

Fifteen hours throughout the year. Five hours credit.

2. (a). Advanced exercises in iron and steel; axle and tire setting, resetting and tempering springs, and horse-shoeing. First term.

(b). A continuation of horse-shoeing; elementary carriage woodwork, including sawing, planing, mortising, the use of the draw-knife, and spoke shaves, making the woodwork of selected vehicles from shop drawings. Second term.

Prerequisite, course 1. Fifteen hours throughout the year. Five hours credit.

3. Advanced horse-shoeing, wheelwrighting, and elementary carriage building, concluding with the construction of an ap-

proved vehicle, is the work of the third year. Fifteen hours throughout the year. Five hours credit. Prerequisite, course 2.

4. A series of selected exercises from course 1 (a), followed by work in horse shoeing and in repairing agricultural implements. Six hours, second term. Two credits.

MACHINE WORK.

1. (a) Elementary forging, concluding with the making, dressing and tempering of lathe and planer tools; special work in chipping, filing, hand polishing and scraping. First term.

(b). Preliminary exercises in drilling, planing, straight and taper turning, accompanied by instruction in the care and use of machinery. Second term.

Fifteen hours, throughout the year. Five hours credit.

2. (a). Exercises in boring and chucking in the lathe, thread cutting, polishing and milling. Cone pulleys, bearings, stuffing-box-glands, grind-stone shaft, are sample exercises. First term.

(b). The manufacture of gear wheels, shaft-couplings, jack-screws, tap wrenches, eccentrics, and cranks for steam engines, constitute the work of the second term.

Prerequisite, course 1. Fifteen hours throughout the year. Five hours credit.

3. (a). The work of this course is principally making engine connecting rods, mandrels, taps, spiral drills, counter-bores, etc., giving practice on the grinding machine. First term.

(b). Practice in making fluted reamers, grinding and making milling cutters, special attention being paid to the forms of the cutting edges. Second term.

Prerequisite, course 2. Time and credit same as course 1.

4. Actual machine construction, factory methods being emphasized. Speed lathes, sensitive drills and power hack-saws may

be taken as sample exercises. Prerequisite, course 3. Time and credit same as for course 1.

FOUNDRY WORK.

1. Thorough practice in moulding and general foundry work, including iron and brass casting. The patterns chosen illustrate a wide range of work, the course being intended to give a general knowledge of foundry practice. Elective. Six hours, first term. Two hours credit.

2. Special moulding, emphasizing such work as will be required in connection with the work of machine design. Elective. Six hours, second term. Two hours credit.

SLOYD.

Intended primarily for younger students who are not sufficiently developed physically to carry the heavier work of the regular Mechanic Arts course. It is also well adapted for teachers who desire to qualify themselves for teaching Sloyd in the district schools. The best Swedish and American methods are followed.

1. (a). Simple household and school-room articles, such as pointers, bread-boards, clothes-horses, foot-stools, scoops, etc., constitute the exercises of this course. Elective. Four hours, first term. Two hours credit.

(b) Elementary turning and scrolling, simple carving, and the completion of a small cabinet. Elective to students who have completed 1 (a). Four hours, second term. Two hours credit.

ART.

ASSISTANT PROFESSOR FLETCHER.

1. **FREEHAND DRAWING AND DESIGN.** Elementary drawing, beginning with silhouette from plant, animal, and object forms and leading up to the treatment of light, shade and color; the fundamental principles of art: balance, rhythm, and harmony. The attention of the students will be directed to the application of these principles to the ordinary things of life. Five hours throughout the year. Two credits.
2. **GENERAL ART STUDY.** The work in this course aims to acquaint the student with the principles that underlie all art. Problems involving selection will be given to develop taste for what is good in pictures, furniture, architecture, weaving, and all other phases of applied art. Five hours throughout the year. Two credits.
3. **OBJECT DRAWING AND DESIGN.** Mass drawing in charcoal, ink and pencil from simple objects, decorative details, casts, etc., with careful study of good proportion and subordination in lines of construction; history of architecture and furniture; relation of construction to art; color study; modeling for carving and casting. Nine hours throughout the year. Three credits.
4. **HOME ART.** A review of the principles of balance, rhythm and harmony, and their application to textiles, furniture, rugs, wall papers, ceramics, etc. As far as possible the designs will be applied in the various materials. Nine hours throughout the year. Five credits.
5. **STUDIO WORK.** Opportunity is given to students to continue in any of the following lines of work: applied art in leather, textiles, basketry, carving, pyrography, cast drawing, pose drawing, animal drawing, clay, modeling, lettering and illustrating. Elective. Hours to be arranged with the instructor.

BACTERIOLOGY.

PROFESSOR FREDERICK.

1. GENERAL BACTERIOLOGY. This course comprises a study of the history, morphology and classification of bacteria, especially of the common disease germs; methods of preparing culture media, obtaining pure cultures, sterilization, mounting, staining and inoculation. Special attention is given to sanitation, and prevention of contagious diseases. Yeasts and moulds are studied, and air, water and soil examined. Nitrifying organisms and the relation of bacteria to soil fertility are discussed. One lecture and two laboratory periods, first term. Three hours credit.

BOTANY.

PROFESSOR NORTHROP.

1. GENERAL BOTANY. Designed to meet the needs of students who intend to make agriculture in some of its branches their life work. Points which touch the farmer's work and aid him to understand his environment are therefore emphasized. A brief study of the systematic, morphological, and ecological aspects of plants completes the course. One recitation and one laboratory period throughout the year.

2. SYSTEMATIC AND MORPHOLOGICAL BOTANY. The aim in this course is to make the students familiar with the higher plants and the terms used in their description and classification. Gray and Coulter, *Textbook of Western Botany*. Two recitations and one laboratory period, second term.

3. HISTOLOGY. A study of plant anatomy, protoplasm, the

cell, and various tissues. Prerequisite, Course 2. One recitation and two laboratory periods, first term.

4. PLANT PHYSIOLOGY. The functions of growth, such as the absorption and use of food, movement of water in the plant, respiration, reproduction, changes of color; the effect of gases, changes of temperature, etc., on the life of plants. Some of the lower forms of plant life will also receive attention. Prerequisites, Courses 2 and 3. One recitation and two laboratory periods, second term.

5. PLANT PATHOLOGY. A study of some of the forms of parasitic plants common to this western country. One lecture and two laboratory periods, second term.

Advanced Elective Courses.

Prerequisites, courses 1 or 2, 3 and 4. Time to be arranged with the instructor.

6. ECONOMIC BOTANY. A study of useful plants and plant products. This course is presented by lectures and assigned readings upon which reports are given. Two hours credit.

7. ECOLOGY. A study of plant relations and adaptation to particular environment. This course consists largely of field work. Reports of investigations are required. Two hours credit.

8. CYTOLOGY. A study of plant cells and their contents from the biological standpoint. Three hours credit.

Courses in Systematic Botany can be arranged as follows:

9. ALGAE AND FUNGI. One lecture and two to four laboratory periods per week. Credit according to work done.

10. MOSSES AND FERNS. (As in course 9.)

11. SEED PLANTS. Lectures and field work with herbarium, particular attention being given to one or all of the following

groups: (a) Gymnosperms. (b) Exogens. (c) Endogens. Credit according to work done.

12. **FOREST BOTANY.** A study of systematic botany as related to forestry; forest plant ecology. Three hours, second term.

13. **POISONOUS PLANTS.** For students of Veterinary Science a course has been arranged to familiarize them with plants commonly supposed to be poisonous to animals. A herbarium of local species must be collected. Prerequisite, course 2. Three hours, second term.

CHEMISTRY.

PROFESSOR WIDTSOE.

PROFESSOR STEWART.

ASSISTANT PROFESSOR GREAVES.

MR. PORTER.

MR. HARRIS.

1. **GENERAL ELEMENTARY CHEMISTRY.** The important facts and fundamental theories of chemistry, and its application in the arts and manufactures. The laws of chemical combination, the writing of reactions, and solving of chemical problems are given careful consideration. Nine hours throughout the year. Five hours credit.

2. **ORGANIC CHEMISTRY.** This course embraces a brief survey of the more important reactions and compounds of the fatty and aromatic series of hydrocarbons and their derivatives, together with a full discussion of the nature and influence of molecular structure. Prerequisite, Chemistry 1. Four hours, first term.

3. AGRICULTURAL CHEMISTRY. Lectures and assigned readings on the chemical problems of agriculture. The aim is to make the student familiar with our present knowledge of the composition of plants; the essential composition of plant foods, the changes through which they pass and their role in plant economy; the composition of animals; the principles of animal nutrition and the chemical nature of waters, dairy products, etc. Prerequisite, Chemistry 1 and 2. Three hours throughout the year.

4. CHEMISTRY OF FOODS AND COOKERY. Foods and methods of cooking are studied experimentally, with especial reference to human nutrition. The common foods, both animal and vegetable, are separated by physical and chemical means into their constituents, after which the effects of different methods of cooking are investigated. Prerequisites, Chemistry 1 and 2. Nine hours, second term.

5. CHEMISTRY OF THE SOIL. A study of the methods of analysis of soils and the interpretation of the results; physico-chemical investigations of soils in their relations to crop production; soils of the arid and humid regions; alkali soils, their nature and composition, utilization and reclamation; soil fertility and methods of maintenance; influence of irrigation upon the production of nitrates, fixation of potash and phosphoric acid. Considerable stress is laid upon the value, composition and preservation of barn-yard manure. Prerequisites, Chemistry 1, 2 and 3. Three hours, second term.

6. ANALYSIS OF FOODS AND FEEDING STUFFS. Various farm products used for food are analyzed to determine quantitatively the different constituents, as proteids, carbohydrates, fats, crude fibre, etc. Prerequisites, Chemistry 1 and 3. Three hours throughout the year.

7. PHYSIOLOGICAL CHEMISTRY. In this course the student considers the chemical changes going on in the living animal

body; the essential composition of foods and the changes through which they pass in the animal economy; the chemistry of secretion and excretion; the chemistry of protoplasm and of the blood; etc. Prerequisites, Chemistry 1 and 2. Three hours, second term.

8. **ELEMENTARY PHYSICAL CHEMISTRY.** Lectures and recitations on some of the fundamental laws and theories of chemistry, including atomic theory, kinetic theory of gases, gaseous, liquid, and solid states, solution, vapor pressure, osmotic pressure, thermo-chemical relations, electrolytic dissociation, chemical equilibrium, law of mass action, isomerism and isomorphism. Elective. Prerequisites, Chemistry 1 and Physics 1. Two hours a week throughout the year.

9. **INDUSTRIAL CHEMISTRY.** Lectures and assigned reading on special chemical industries; e. g., the manufacture of sulphuric acid and soda, commercial fertilizers, lime and cements, glass and porcelain, pigments, sugar, starch, alcohol, soap, explosives, etc. Elective.

10. **QUANTITATIVE ANALYSIS.** This is mainly a laboratory course, giving the student practice in the typical methods of proximate and ultimate quantitative chemical analysis. Elective.

11. **ADVANCED QUANTITATIVE ANALYSIS.** This is purely a laboratory course, and is recommended to those General Science students who specialize in Chemistry. Elective. Prerequisite, Chemistry 1. Three hours, first or second term.

12. **RESEARCH WORK.** The laboratories of the College and the Experiment Station are open to students with the necessary preparation, who desire to pursue special independent studies in chemistry. The researches carried on by the chemical department of the Experiment Station are of great aid to students who are engaged in the solution of scientific problems. Elective. Prerequisites, courses 2 and 5.

ENGLISH.

PROFESSOR LARSEN.

ASSISTANT PROFESSOR PEDERSEN.

ASSISTANT PROFESSOR HOLMGREN.

MISS HUNTSMAN.

MISS KYLE.

MR. EVANS.

1. COMPOSITION AND GRAMMAR. A course in elementary composition, with special emphasis on grammatical correctness. Four short themes or one longer composition required weekly. The study of grammar aims at displacing habitual errors of speech by the correct forms. Several elementary classics are read. The course is designed for all students not graduated from the public schools. Five hours throughout the year.

4. ELEMENTARY RHETORIC AND COMPOSITION. The student is required to write three short themes a week and a long theme once a month. The aim is to secure correctness combined with spontaneity. Throughout the course special drill is given on those grammatical principles most frequently violated. Spelling and the correct use of the dictionary receive careful attention. A certain amount of reading is assigned and one day a week is devoted to oral expression. The pupils are required to commit and deliver passages from the texts studied in the class room. The elementary principles of public speaking are thus taught and applied. Five hours throughout the year.

5. ENGLISH COMPOSITION. Class room discussions of the principles of rhetoric, oral and written compositions, assigned readings, and conferences. It is intended to make this an extremely practical course in paragraph writing. To this end a large amount of oral and written composition is required; during the greater part of the year daily one-page themes are pre-

pared, and longer fortnightly themes are written throughout the year. Each student has regular conference periods with the instructor. A certain amount of prescribed reading supplies passages for memory and furnishes material for themes and classroom discussion. Five hours throughout the year.

6. **ENGLISH LITERATURE.** History and development of English Literature in outline, from the Anglo-Saxon period to the present day. This course is the only prescribed course in English Literature. It aims to give every student who is graduated a general knowledge of the progress and growth of literature in England. All the important authors are studied at considerable length, not only in relation to the great literary movements, but also in relation to the historical background. The work is carried on partly by lectures, partly by recitations. A great deal of prescribed reading furnishes material for class-room discussions and written reports, thus giving the students constant practice in composition. The student is also required to commit a number of poems or parts of poems to memory. Three hours throughout the year.

7. **ADVANCED RHETORIC.** Lectures, recitations, assigned readings, themes and conferences. This is intended to be a comprehensive course in College Rhetoric, with special attention to the forms of prose discourse. The practical work consists of short daily and longer fortnightly themes. A certain amount of reading is prescribed. Three hours throughout the year.

8. **THE ELIZABETHAN DRAMA.** The development of the drama in England. Incidentally its origin and technique receive attention. Lectures, prescribed readings and reports. Elective. Prerequisite, English 6. Three hours throughout the year.

9. **THE ROMANTIC MOVEMENT.** The origin and growth of romanticism in the English literature of the eighteenth and nine-

teenth centuries; foreign influences and parallels. Elective. Prerequisite, English 6. Three hours a week throughout the year.

10. SHAKSPERE. A course in careful detail study, covering one or two representative plays of each group. Incidentally, the technique of the drama is discussed. Elective. Prerequisite, English 6. Three hours throughout the year.

11. LITERARY TYPES. A careful study of the various kinds of poetry, fiction, and other forms of prose literature. A survey of English versification forms part of the course. Lectures, assigned readings, reports. Elective. Prerequisite, English 6. Two hours throughout the year.

12. AMERICAN LITERATURE from the Colonial times to the present, keeping in view contemporary development in England. Lectures, assigned readings, reports. Elective. Prerequisite, English 6. Two hours throughout the year.

13. THE ENGLISH NOVEL. Its origin, development, and most important types. The short story is also given some attention. Lectures and recitations, assigned readings and reports. Elective. Prerequisites, English 6. Two hours, Saturday, throughout the year.

ELOCUTION.

MISS HUNTSMAN.

1. ELOCUTION. Class room work in voice culture and the principles of literary expression. The aim of this course is to teach pupils to read clearly and intelligently, and with true art such selections from the masterpieces of our literature, as have been intellectually and spiritually assimilated. Elective. Prerequisite, English 4. Three hours throughout the year.

2. **ELOCUTION.** In this course the principles of literary expression are applied in the main, to the interpretative study of dramatic literature. Shakspeare and some of the modern dramatists are carefully studied, both technically and interpretatively. Elective. Prerequisite, Elocution I. Three hours throughout the year.

3. **PUBLIC SPEAKING.** Practical training in the various forms of public speaking: the formal address, the debate, the eulogy, the oration, the short, impromptu speech, the toast. The aim of this course is to train the pupil to think on his feet, and to deliver himself intelligently, logically, effectively and with ease. Elective. Prerequisite, English 5. Three hours throughout the year.

GEOLGY.

PROFESSOR PETERSON.

1. **PHYSIOGRAPHY.** Intended to develop observation, and give an appreciative knowledge of nature's work in and about the earth. The subjects studied include: the earth in space, the structure of the earth, land forms, erosions, lakes and lake basins, glaciation, the sea and its work, the atmosphere and the effect of physiographic conditions on agricultural products. An effort will also be made to give each student some knowledge of the common rocks. Fairbanks, *Physical Geography*. Two hours throughout the year.

2. **GENERAL GEOLOGY.** Intended to familiarize the student with the physiographic changes now in progress and the agencies which produce them, with the origin and structure of the various materials composing the earth's crust, and with the chronological succession of the great formations. A careful study of the development of the North American continent from the earliest time will comprise most of the second term's work. Enough

field practice is given to introduce the methods by which the geological phenomena of a given area may be interpreted. Scott, *Introduction to Geology*. Three hours throughout the year.

3. ECONOMIC GEOLOGY. The object is to give the student some idea of the mineral resources of the United States. The work will include a careful study of the processes of preparation, and economic value of coal, petroleum, natural gas, asphaltum, building stones, cements, clays, mineral fertilizers, mineral water, fuller's earth, lithographic stone, precious stones, etc. Much of the information will be taken from the Reports of the United States Geological Survey. Elective. Prerequisites, Geology 2 and Chemistry 1. Two hours throughout the year.

4. MINERALOGY. A systematic study of the common minerals as outlined in Dana's Manual. The student is furnished with excellent specimens of all the minerals studied, for both tests and comparisons. The course is essentially individual laboratory work in blow pipe analysis and determinative mineralogy. Elective. Prerequisite, Chemistry 1. Two hours throughout the year.

HISTORY.

PROFESSOR THOMAS.

MISS KYLE.

MR. EVANS.

1. GREEK AND ROMAN HISTORY. An elementary course in Ancient History. Such reading is done as is necessary to supplement the text. It is the purpose of this work gradually to give the student a broad view of history. Greek history occupies the first term; Roman, the second. Meyer, *Ancient History*. Three hours throughout the year.

2. UNITED STATES HISTORY. A study of social life, eco-

AGRICULTURAL COLLEGE OF UTAH.

conomic conditions, political development, and historical literature. Lectures are occasionally given, and library work is required. Channing, *Student's History*. Three hours throughout the year.

3. ENGLISH HISTORY. Racial traits, constitutional growth, social life at different stages, English conservatism, colonial systems, and pauperism are some of the topics discussed. Elective. Prerequisite, course 1. Three hours throughout the year.

4. MODERN EUROPEAN HISTORY. A study of European history from Charlemagne to the present time. Among the topics discussed are: the growth of monarchies, the French Revolution, formation of the German Empire, development of the Swiss Confederation, the Napoleonic wars. Three hours throughout the year.

LIBRARY WORK.

MISS SMITH.

The subject includes the study of general reference books, such as encyclopedias, dictionaries, atlases, cyclopedias of special subjects, indexes to periodicals and general literature, handbooks of information and public documents. Talks will be given on classification and cataloguing of the books in the library, explaining their arrangement on the shelves and the use of the card catalogue. The object of the course is to familiarize the student with the library and to teach him how to obtain information quickly. One hour throughout the year.

MATHEMATICS.

PROFESSOR LANGTON.

MR. RUDOLPH.

MR. COBURN.

1. ARITHMETIC. A thorough treatment of elementary arithmetic. Required of students not graduated from the district schools, who are admitted to the Manual Training Courses. Five hours throughout the year.

2. ARITHMETIC AND ALGEBRA.

(a) *Advanced Arithmetic*. Special attention is given to the nature, origin and development of number. The class recitation hour is devoted to thorough consideration of the fundamental processes of arithmetic, including contracted methods of multiplication and division, common and decimal fractions, factors and multiples, mensuration, the metric system of weights and measures, square and cube root, proportion, percentage and interest, and practical problems. First term.

(b) *Algebra*. A thorough treatment of the fundamental operations, use of parentheses, factoring, highest common factor, lowest common multiple, fractions, and simple equations. Second term.

Five hours throughout the year. One section gives special attention to Commercial Arithmetic.

3. ALGEBRA, GEOMETRY.

(a) *Higher Algebra*. After a brief review of the subjects treated in Course 2 (b), the following subjects are considered: simple equations, inequalities, involution and evolution, theory of exponents, radicals, quadratic equations, ratio and proportion, progressions, and binomial theorem. Wells, *New Complete Algebra*. First term.

(b) *Plane Geometry*. The general properties of polygons; problems of construction, and determination of areas; regular

polygons and circles, with problems in construction, and methods of determining the ratio of the circumference to the diameter; maxima and minima. Special attention is given to the development of the power of logical thinking, and of accuracy and conciseness of expression. Wells, *The Essentials of Geometry*. Second Term.

Five hours throughout the year.

4. GEOMETRY, ALGEBRA, TRIGONOMETRY.

(a) *Solid Geometry*. Wells, *Geometry*. First third of year.

(b) *Advanced Algebra*. A continuation of Course 3 (a); includes a thorough drill in the most important principles of higher algebra. Second third of year.

(c) *Trigonometry*. The deduction of general trigonometric formulæ, the solution of plane and spherical triangles, and practice in the use of logarithmic tables. Lyman and Goddard, *Trigonometry*. Last third of year.

Five hours throughout the year.

5. ANALYTIC GEOMETRY, CALCULUS.

(a) *Analytic Geometry*. The analytic geometry of the straight line, the circle, and the conic sections, including a discussion of the general equations of the second degree, and some special examples in transcendental and higher plane curves.

(b) *Differential Calculus*. The development of the fundamental principles and formulæ of the differential calculus; applications to various problems in plane geometry and analysis, such as indeterminate forms, maxima and minima, curvature, expansions of functions in series, evolutes and involutes, and curve tracing.

(c) *Integral Calculus*. Integration of various forms; development of the formulæ of the integral calculus; application in rectification of curves, quadrature of plans and curved surfaces, cubature of volumes, etc. Elective. Prerequisite, course 4. Five hours throughout the year.

6. MODERN GEOMETRY. This course treats the most important theorems and examples connected with harmonics, anharmonics, involution, projection, including homology, and reciprocation. Cremona, *Projective Geometry*; Russell, *Treatise on Pure Geometry*; Lauchlan, *Modern Pure Geometry*. Elective. Prerequisite, course 5. Five hours throughout the year.

7. DIFFERENTIAL AND INTEGRAL CALCULUS, ADVANCED COURSE. This course embraces the elements of the theory of functions of imaginary variables; the various methods of integration systematically treated; the elements of the theory of the elliptic functions; the mechanical and geometrical applications of the calculus treated more fully than in course 5; and some of the more important cases of differential equations. Todhunter, *Differential Calculus*, and Williamson, *Integral Calculus*. Elective. Prerequisite, course 5. Five hours throughout the year.

8. DESCRIPTIVE GEOMETRY. The representation and the solution of problems relating to geometrical magnitudes in space, including orthographic projections and development; projections of plane and solid intersections; shades and shadows; and applications to stereotomy, sheet-metal work, and other structural problems. Elective. Six hours throughout the year. Two hours credit.

MILITARY SCIENCE AND TACTICS.

CAPTAIN PERRY.

Military instruction at the College is not a matter of choice with the authorities or the students. The Congress of the United States requires this instruction in return for large appropriations; it is thus an obligation—an obligation in return for the advantages of free education.

The aim of the department is to qualify young men for positions as commissioned officers of volunteer forces. All able-

bodied male students of the College *below Senior and above First Year* are enrolled in the Military Department.

A uniform must be worn by all students when at drill. Arrangements have been made by which the uniform can be obtained through the Secretary of the College at actual cost, about fifteen dollars. The attention of students intending to enter college is called to the fact that this uniform has been found more serviceable than civilian clothes of the same price, and that all must be prepared to order the uniform when they enter.

The organization conforms to the company and battalion organization of the regular army. The officers and non-commissioned officers are selected after competitive examinations. In general the officers are taken from the higher college classes, the non-commissioned officers from the lower.

A cadet band is maintained under the immediate charge of the Director of the School of Music. It appears with the cadet battalion at parades, reviews and other ceremonies.

PRACTICAL.

Four hours a week, throughout the year. Required of all, except seniors and first year students. Infantry—school of the soldier, squad, company and battalion. The ceremonies of guard mounting, parade and review; advance and rear guard; outposts; practice marches; target practice.

For target practice the college has excellent indoor and outdoor ranges. The U. S. government gives an ample allowance of ammunition.

THEORETICAL.

One hour a week throughout the year.
First Year (in the Military Department).

Infantry Drill Regulations.

Manual of Guard Duty.

Second Year.

Infantry Drill Regulations (Review).

Small Arms Firing Regulations.

Third Year.

Military Field Engineering.

Field Service Regulations.

Lectures on the Art and Science of War.

Fourth Year.

Military Law.

Lectures on the Art and Science of War.

The satisfactory completion of both the practical and the theoretical work prescribed for any one year entitles the student to one hours' credit.

ORGANIZATION—1907-1908.

Adjutant, Alfred P. Monson.

Sergeant Major, Charles Laurenson.

Color Sergeant, L. V. Rogers.

	<i>Company A.</i>	<i>Company B.</i>
Captain,	Wm. Mortimer,	J. A. Marley.
First Lieutenant,	L. C. Monson,	Melvin Smart,
Second Lieutenant,	D. W. Holmes,	(Vacancy).
First Sergeant,	J. T. Steed,	J. A. Nelson,
Sergeants,	C. C. Spencer,	J. R. Miller
	J. L. Montrose,	Howard Maughan,
	W. S. Beatie,	Nephi Larsen,
	L. O. Langford,	Robert Hoggan,
		H. W. Powell.
Corporals,	G. M. Steed,	Vern W. Pace,
	Amos P. Jones,	Lloyd Oldham,
	Albert E. Jones,	Seeburn Richards,
	Ray P. Cahoon,	Newell Crookston.
	Orene Nelson.	

MODERN LANGUAGES AND LATIN.

PROFESSOR ARNOLD.

1. FIRST YEAR FRENCH. Francois, *French Grammar*, and Snow and Le Bon, *Easy French*, form the basis of the grammatical and conversational work. Three or four modern texts are read, such as Dumas' *Les Trois Mousquetaires*, About's *Le Roi des Montagnes*, and Halevy's *L'Abbe Constantin*. Five hours throughout the year. Three hours credit.

2. SECOND YEAR FRENCH. Francois' *French Composition* is the basis of a grammatical review and of writing in French. Lavissee's *Histoire de France* is used as subject matter for conversation, while the work in reading consists in translating works of the more important of the nineteenth century authors. During the second term a weekly composition in French is required. Prerequisite, course 1 or an equivalent. Three hours a week throughout the year.

3. THIRD YEAR FRENCH. The object of the course is a systematic study of French literature with Doumic's *Histoire de la Literature Francaise* as basis. Weekly compositions in French will be required, based on outside reading. The class work will be the reading and discussion of as many of the plays of Racine, Corneille and Moliere as possible, with lectures in French by the instructor. The course may be taken with credit two years in succession, as it will alternate with work on the nineteenth century poets. Prerequisites, courses 1 and 2 or an equivalent. Three hours throughout the year.

4. SCIENTIFIC AND HISTORICAL FRENCH. Translation of monographs on scientific subjects by recent French writers as contained in standard French scientific magazines; sight reading and rapid translation of topics from French writers on history and economics. Prerequisites, courses 1 and 2 or an equivalent. Two hours throughout the year.

SPANISH.

1. FIRST YEAR SPANISH. Hill and Ford, *Spanish Grammar*; Matzke, *First Spanish Readings*; Valdes, *Jose*; Alarcon, *El Capitan Veneno*. Optional with French or German in the Commercial Course. Five hours throughout the year. Three hours credit.

2. SECOND YEAR SPANISH. Ford, *Spanish Composition*; Picatoste, *Historia de Espana* as basis for conversation; rapid reading of such modern texts as Valera's *Comendador Mendoza*; Galdos, *Dona Perfecta and Electra*; Breton, *Quien es ella?*; and one classical play. Prerequisite, course 1. Three hours throughout the year.

GERMAN.

1. FIRST YEAR GERMAN. Ball, *Elements of German* and Bernhardt, *German Composition* form the basis of the grammatical and written work. The work in reading begins with Wenckebach's *Glueck Auf*, and is followed by three or four easy texts. Several poems are memorized. Five hours throughout the year. Three hours credit.

2. SECOND YEAR GERMAN. Bernhardt, *German Composition* is finished and work in original German composition is begun. Andrea, *Erzaehlungen aus der deutschen Geschichte* is used as basis for conversation and foundation for future understanding of German literature. Many texts are rapidly read, selected from the works of Riehl, Sudermann, Wildenbruch, Freytag, Heine, and other nineteenth century authors, with one scientific text. Three hours throughout the year.

3. THIRD YEAR GERMAN. A systematic study of German literature is begun with Keller's *Bilder aus der deutschen Literatur* as basis. As much as possible of the work of Lessing, Schiller and Goethe is read and discussed. Prerequisites, courses 1 and 2 or an equivalent. Three hours throughout the year.

4. **SCIENTIFIC GERMAN.** The work will consist of rapid reading of scientific texts with the study of cognates, beginning with Walther's *Meereskunde* and Lassar-Cohn's *Chemie im taeglichen Leben*, and followed by monographs by Cohn, Helmholtz, Dubois-Raymond, and other German scientists. Two hours throughout the year. Prerequisites, courses 1 and 2 or an equivalent.

LATIN.

The following courses in Latin are offered to students in three year courses, and to students in college courses who have not presented parallel courses as entrance requirements:

1. **FIRST YEAR LATIN.** Collar and Daniel, *First Year Latin; Viri Romae*. Drill on essentials of Latin grammar; comparison with English grammar, acquiring of vocabulary; English words derived from Latin; selections for reading. Five hours throughout the year.

2. **SECOND YEAR LATIN.** Greenough, D'Ooge and Daniel, *Second Year Latin*; D'Ooge, *Latin Composition based on Caesar*; Bennett, *Latin Grammar*; selected readings from Part 1, *Second Year Latin*; an equivalent of four books from selections from Cæsar; oral and written composition. Attention is given to etymology of English derivatives and cognates; accuracy and facility in translation into idiomatic English; sight translation. Prerequisite, course 1. Five hours throughout the year.

MUSIC.

PROFESSOR THATCHER.

MRS. LINNARTZ.

MR. SPICKER.

MR. CLARK.

The following courses in music are arranged with the two-fold idea of laying a sure foundation for professional work along any of the lines of this art, and to fit the student for the proper application and fullest enjoyment of the classic compositions of famous composers. Theory of music as exemplified in the study of harmony, counterpoint and musical form, will be considered, and as far as possible urged upon the student in both vocal and instrumental departments. Ensemble work may be had in the quartette, choir, band, and orchestra organizations. These advantages, together with those furnished by free concerts and recitals, constitute the strongest features of a Conservatory Course and will be open to any and all students of the College.

A certificate of graduation will be given upon the completion of any of the following courses:

FOUR YEAR PIANO COURSE. Completion of regular four years' work as prescribed, together with one year of vocal music and one year of harmony.

FOUR YEAR VOCAL COURSE. Completion of four years' regular prescribed work, together with two years of piano and one year of harmony.

FOUR YEAR VIOLIN OR VIOLONCELLO COURSE. Completion of four years' regular prescribed work, together with two years of piano and one year of harmony.

FOUR YEAR COMPOSITION COURSE. Regular prescribed work, together with three years on piano, violin, cello, or cornet.

VOICE CULTURE AND ART OF SINGING.

FIRST YEAR. Breathing, study of vowel forms, elementary vocalization, easy songs.

SECOND YEAR. Vocalization, solfeggio songs.

THIRD YEAR. Vocal studies, songs, arias, solo parts in easy operas, first year harmony, piano.

FOURTH YEAR. Advanced studies, English classic songs, German and Italian songs, arias, piano, etc.

PIANOFORTE.

FIRST YEAR. Position, hand culture, rhythm, scales, elementary work from Gurlitt, Beyer, Czerny and others.

SECOND YEAR. Easy studies and sonatinas by Bertini, Clementi, Kuhlan, Kohler, Loeschorn; easy pieces.

THIRD YEAR. Studies by Czerny, Dorn, Hiller, Gobbaert, and Craemer, Sonatas by Mozart, Haydn and others; first year voice and singing.

FOURTH YEAR. Studies by Craemer, Kessler, Clementi, *Gradus ad Parnassum*, solo pieces by Schubert, Mendelssohn, Chopin, Raff and others; first year harmony.

ORGAN.

FIRST YEAR. A standard method, and easy studies and pieces.

SECOND YEAR. Parallels piano course; carefully selected pieces suitable for the organ.

VIOLIN.

FIRST YEAR. David School, Book I. Sitt Opus 35.

SECOND YEAR. David School, Book II. Studies by Kayser; easy solos and duets; orchestra practice; first year piano.

THIRD YEAR. Kreutzer, 42 Exercises; studies by Fiorilli; orchestra; second year piano.

FOURTH YEAR. Rode, 24 exercises; Rovilli, 12 exercises; Garinni, 24 exercises; Dont's Gradus; concertos, Viotti, Mendelssohn, etc.; orchestra; first year harmony.

VIOLONCELLO.

FIRST YEAR. Part of Kummer's method for Violoncello with easy pieces.

SECOND YEAR. Balance of Kummer's method; easy studies by Dotzauer; easy pieces; orchestra practice, first year piano.

THIRD YEAR. Studies by Dotzauer; pieces moderately difficult; cello parts to easy trios and quartettes; orchestra; second year piano.

FOURTH YEAR. Balance of studies by Dotzauer; pieces of more advanced grades; cello parts to trios, quartettes, etc.; orchestra; harmony.

CORNET AND OTHER BRASS INSTRUMENTS.

The course of study for these various instruments corresponds in general with that for string instruments.

MANDOLIN AND GUITAR.

FIRST TWO TERMS. First, second and third position; part of a standard method, and easy pieces.

LAST TWO TERMS. Balance of method; more advanced work and *ensemble* playing.

HARMONY AND COMPOSITION.

FIRST YEAR. Goetschius, *Tone Relations*; first year of piano or other instruments.

SECOND YEAR. Advanced harmony; simple counterpoint; melody writing; second year piano, violin, etc.

THIRD YEAR. Counterpoint; smaller forms; vocal and instrumental; third year piano, violin, etc.

FOURTH YEAR. Large forms; instrumentation.

CHOIR AND GLEE CLUBS.

Time devoted to practice; five hours a week for Choir; two hours a week for Glee Clubs; either counting towards graduation.

BAND AND ORCHESTRA.

Five hours a week will be devoted to this work, counting towards graduation.

In addition to the foregoing, a "Choir Leader's Class" will be conducted by Director Thatcher, which (presupposing a fair knowledge of notation, keys, and intervals) will embrace the following: tone production as applied to the human voice, breathing, arrangement of choir, balance of parts, elements of time beating, reading and interpretation of small scores, and practices.

TUITION.

For Term of Fifteen Weeks—Payable in Advance.

(No entrance fee will be charged special students in music.)

VOICE.

<i>First Year.</i> Class of three, one lesson a week.....	\$ 7.50
<i>Second Year.</i> (Private Instruction),	
One lesson a week	15.00
<i>Advanced</i> , one lesson a week	\$22.50

PIANO.

<i>First Year.</i> Class of three; one lesson a week	\$ 7.50
<i>Second Year.</i> Class of three; one lesson a week.....	10.00
<i>Advanced.</i> Private instruction; one lesson a week	15.00
<i>Advanced.</i> Private instruction; two lessons a week	25.00

ORGAN.

<i>First Year.</i> Private instruction; one lesson a week.....	\$ 7.50
<i>Second Year.</i> Private instruction; one lesson a week.....	10.00
<i>Advanced.</i> Private instruction; one lesson a week.....	15.00

VIOLIN.

<i>First Year.</i> Class of three; one lesson a week.....	\$ 7.50
<i>Second Year.</i> Private instruction; one lesson a week.....	15.00
<i>Advanced.</i> Private instruction	22.50

VIOLONCELLO.

<i>Class Lessons.</i> One lesson a week.....	\$ 7.50
<i>Private Instruction.</i> One lesson a week	10.00

CORNET AND BAND INSTRUMENTS.

<i>Class Lessons.</i> One lesson a week	\$ 7.50
<i>Private Instruction.</i> One lesson a week	10.00

MANDOLIN AND GUITAR.

One lesson a week	\$ 7.50
Two lessons a week	10.00

HARMONY.

Class of three; one lesson a week	\$ 7.50
Class of three; two lessons a week.....	10.00

CHOIR LEADER'S CLASS.

Two lessons a week	\$ 7.50
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REGISTRATION IN MUSIC WORK 1907-8.

Choir.....	70
Male Glee Club.....	20
String Quartette.....	4
Band	30
Orchestra	16
Mandolin and Guitar Club.....	16
Private Pupils.....	53
	209
Names repeated.....	44
Total number of persons.....	165

PHYSICAL EDUCATION.

PROFESSOR TRETZEL.

MISS HUNTSMAN.

It is the aim of the Department of Physical Education to foster hygienic habits among the students, and so direct their exercise that they may have a physical development fit to support and make efficient the mental development which they seek in attending the institution. This is accomplished, first, by giving them the needed opportunity for gymnastic exercises; second, by encouraging athletic games, thereby stimulating an interest in their physical efficiency and in the pleasure of physical activity; and, third, by giving them a guiding knowledge of the principles of physical education. All the work is based upon a careful physical examination and strength test.

PHYSICAL EDUCATION FOR MEN.

1. Open to all male students of the institution. Three hours a week. One hour credit.

(a) GYMNASIUM EXERCISES. These consist of vigorous drills with dumb bells, Indian clubs, wands, etc., and gymnasium games under the supervision of the instructor.

(b) LECTURES. The gymnasium work is supplemented by lectures on personal hygiene, the physiology of exercise, first aid to the injured, etc.

PHYSICAL EDUCATION FOR WOMEN.

Two years of physical education are required of all women students of the College. The work of the courses is arranged, as far as possible, with reference to the needs of the individual student. The hygienic, corrective, and educative effects of exercise are sought in the arrangement of movements.

Students are required to wear full gymnasium costume, con-

sisting of blouse, divided skirt and slippers. Costumes are ordered through the Secretary of the College and furnished to the student at actual cost, which is about \$3.50.

FIRST YEAR COURSE. The aim of this course is to overcome physical defects, to establish a correct carriage of the body, and to strengthen the muscles. The course consists of relaxing exercises, mat exercises, corrective and floor movements, adapted from the German and Swedish systems, exercises with light apparatus, marching, dancing, and games.

SECOND YEAR COURSE. A continuation of the first year course. The variety of movements is increased according to the ability and progress of the student. Practice in basket ball, hockey and tennis.

PHYSICS.

PROFESSOR WEST.

1. ELEMENTARY PHYSICS. A first course in the elements of Physics, presented mainly from the experimental standpoint. The lectures are illustrated by numerous demonstrations, and students spend two periods a week in the laboratory. Millikan and Gale, *A First Course in Physics*. Three hours throughout the year.

2. GENERAL PHYSICS. Lectures, demonstrations, recitations and student laboratory work covering the whole field of Physics as far as the time will permit. Watson, *A Text Book of Physics*. Elective. Four hours throughout the year.

3. MECHANICS, MOLECULAR PHYSICS, AND HEAT. Classroom and laboratory work covering selected chapters from *Mechanics and Heat*; also the kinetic theory, capillarity, solution, electrolysis and elementary thermodynamics. Elective. Three hours throughout the year.

4. **ELECTRICITY, LIGHT AND SOUND.** Of the same grade and conducted in the same way as course 3. In addition to the selected work in electricity and sound, diffraction, dispersion, interference, and polarization of light will be taken up, as well as radioactivity and the electron theory. Elective. Three hours throughout the year.

ZOOLOGY AND ENTOMOLOGY.

PROFESSOR BALL.

PROFESSOR TITUS.

ASSISTANT PROFESSOR PETERSON.

MR. HORTON.

1. **ELEMENTARY ANATOMY AND PHYSIOLOGY.** The structure and function of different parts of the human body, especial attention being given to the principles that underlie the care of the body. Special lectures are given on diet, ventilation, exercise, use of medicines, and other hygienic topics. The laboratory work familiarizes the student with the human skeleton as compared with that of other animals, and with the microscopic study of tissues which is taken up by means of prepared slides. Two recitations and one laboratory period throughout the year. Two credits.

2. **GENERAL ZOOLOGY.** In this course the student begins with the lowest invertebrates, a typical example of each group being studied in detail and dissected in the laboratory, and the related forms discussed. The higher forms are taken up in their natural order, the invertebrates being studied the first, and the vertebrates the second term. Two lectures and one laboratory period throughout the year. Three credits.

3. **BIOLOGICAL LECTURES.** The principles of variation, selection, adaptation, heredity and kindred subjects in their re-

lation to evolution. Especial attention is paid to the recent discoveries in the laws of Heredity, and the fundamental principles underlying animal breeding. Elective. Prerequisite, Course 2. Two lectures a week throughout the year.

4. **ADVANCED PHYSIOLOGY.** The phenomena of life, chemical composition of the body, physiology of the cell, nutrition, circulation, nervous system and sense organs, and other related subjects are discussed. Elective. Prerequisite, Zoology 1 and Chemistry 1. Three hours, second term.

5. **HISTOLOGY.** Lectures on the development of the elementary tissues and the formation and functions of the organs and tissues of the body. Prepared slides of human and other vertebrate tissues are used in the laboratory. The student becomes familiar with the methods of examination and permanent preparation of tissues. Three or five credits.

6. **EMBRYOLOGY.** The general principles of animal development, beginning with the cell and taking up the formation of the embryo and foetal membranes in the vertebrates. Special attention is paid to the development of the chick and the higher mammals. Prerequisite, Course 2. Two recitations and one laboratory period, second term. Three credits.

7. **ADVANCED VERTEBRATE ZOOLOGY.** Students in this course take up the comparative anatomy of the higher vertebrates and the classification of the more common forms of the intermountain region. Elective. Prerequisite, course 2. One recitation and one laboratory period, first term. Two credits.

8. **ECONOMIC ORNITHOLOGY.** The food-habits, classification and general relations of the common birds to agricultural interests receive careful attention. Elective. One recitation and one laboratory period, one term. Two credits.

9. **ANIMAL PARASITES.** This course includes a considera-

tion of the principal external and internal parasites of man and the domestic animals. Their classification and identification, and remedial and preventive measures for their control are fully considered. Two recitations and one laboratory period first term. Three credits.

10. ADVANCED SYSTEMATIC ENTOMOLOGY. Research work in entomology will be given to students specializing in that subject. They will be expected to take up some group of insects and study their classification and relations to other groups and to examine the literature relating to the subject. Elective. Three or five credits.

EXTENSION DEPARTMENT.

PRESIDENT WIDTSOE.
PROFESSOR MERRILL.
PROFESSOR BALL.
PROFESSOR NORTHROP.
PROFESSOR THOMAS.
PROFESSOR McLAUGHLIN.
PROFESSOR FREDERICK.
PROFESSOR HOGENSON.
PROFESSOR COOPER.
PROFESSOR TITUS.
PROFESSOR CAINE.
PROFESSOR GOODWIN.
MISS LOVE.
MISS POWELL.

The College Extension department is organized with the view of taking up those questions which affect the life of the rural community. It is the aim of the department to stimulate an interest in attractive and healthful home surroundings, to create a

desire for neat and well ordered farmsteads, and to seek by every legitimate means to direct the labor expended on the farm in an intelligent way. The work of the Department consists of answering questions by correspondence, giving lectures at farmers' institutes, conducting farmers' schools, lecturing before teachers' institutes and commercial clubs.

During the past year twelve schools, of a week's duration each, have been held, and this work will be continued during the coming year. One of these schools will be held in each county wherever there is a guarantee that at least 100 men and women will be in attendance who will together pay a fee of \$75.00 to assist in defraying the expenses.

The subjects discussed at these schools will meet the needs of the various localities where they are held. At these schools separate sessions are held for the men and the women in the forenoon and the afternoon, these sessions being devoted to lectures and demonstrations, on the practical problems of the farm and home. The evening sessions, at which there are lectures on subjects of general interest to the community at large, are held conjointly.

AGRICULTURE.

The subjects discussed at the men's sessions include soils, field crops, farm animals, dairying, poultry, irrigation, arid farming, horticulture, insect pests, diseases of farm animals, farmers' organization, marketing farm products, etc.

DOMESTIC SCIENCE.

Improvements in methods of housekeeping have not kept pace with the introduction of improved machinery on the farm, and the farmers' wives and daughters are beginning to realize that the time has come when the kitchen at least must be remodelled and many appliances and conveniences added. Not only are we offering courses in this line of work at the College, but we are willing to bring those courses to the doors of those who cannot leave their homes.

In connection with the farmers' schools a week's school in Domestic Science is given for women. Practical lectures on such subjects as "Bread making," "Home decorations," "House plants," "Nursing the sick in the home," "Cheese and butter making," will be given. Demonstrations on meats, soups, sauces, salads, creams, jellies, cakes, etc., will form a very important phase of the work. The benefits attending these schools are varied; such as the exchanging of ideas and learning how to do common everyday duties in a simple manner; enabling us to economize in the most precious commodity we possess, viz., time. We are also enabled to learn the reason we do certain things, and to do them from a scientific standpoint.

WINTER COURSES.

In order to be of the greatest service to the greatest number of people the College offers, and has offered annually since its opening year, a series of winter courses. Hundreds of persons, young and old, men and women, unable to attend school at any other time, have in the past taken advantage of this opportunity, and the number increases each winter. These courses, of varying periods of duration, furnish instruction in all the branches of Agriculture, Domestic Science and Arts, Mechanic Arts, Commerce, and Forestry. In addition the student is permitted to take any course or courses in any of the other departments for which he may be prepared. All the work is elective. The registration fee is \$2.50.

AGRICULTURE. Instruction, both theoretical and, whenever possible, practical, in agronomy, judging, management and feeding of live stock, dairying, poultry culture, economic entomology, horticulture, irrigation and drainage, farm accounting, and veterinary science.

DOMESTIC SCIENCE AND ARTS. A study, largely by practice

in the laboratories, of cooking and sewing in all their branches; courses are also offered in home economics and art, hygiene and dairying.

MECHANIC ARTS. The student spends practically all his time in the shops devoting himself to carpentry or forging or to both. If prepared he may study cabinet-making, horse-shoeing and carriage repairing.

COMMERCE. Book-keeping by single and double entry, commercial arithmetic, penmanship, commercial law.

FORESTRY. Designed both for men wishing to enter the Forestry service and for those already in the department who wish to rise in their profession. Instruction is given by men of prominence in the Western Forestry Service, men who understand needs and conditions in the Rocky Mountain reserves. Courses are offered in lumbering, grazing, silviculture, surveying, mathematics, English.

SUMMER SCHOOL.

The College maintains, as an integral part of its work, a summer session, beginning on the first Monday in June,* and continuing for five weeks. Every department of the College is represented, the courses of instruction being arranged to meet the peculiar needs of summer students. For the benefit of teachers, special courses are provided in pedagogy, psychology, sloyd, and nature study, in addition to the regular work in Agriculture, Domestic Science, etc. College students desiring to make up conditions or prepare for advanced work are given all assistance possible. The entire equipment of the institution is available for the summer session, and every care is taken to preserve the standard and the spirit of the College. No admission requirements are prescribed, but students in all departments are directed by in-

*June 1, 1908.

*June 7, 1909.

structors to those courses in which they may pursue work to the best advantage. No one is advised to elect more than two courses. Students will receive such credits on the College register as the quality and amount of work done may warrant. Arrangements have been made with county superintendents throughout the State to accept Summer School credits in individual subjects in lieu of examination. In addition to the routine work of the session, a course of daily lectures is provided, appealing both to teachers and to the general public, and covering a wide range of interesting subjects. An entrance fee of \$2.50 is charged for each course for which the student registers. Board and rooms can be secured throughout the city at the usual prices. Special Summer School Circular will be sent on request.

NORMAL TRAINING.

For the purpose of providing specially trained teachers of domestic science and arts, agriculture, and mechanic arts, arrangements have been made whereby the graduates of the State Normal School of the University may enter the degree courses of the Agricultural College and there receive technical work in domestic science and arts, agriculture, and mechanic arts. All the work done in the State Normal School will be credited the candidates for the professional degree.

Graduates from the degree courses in Domestic Science and Arts, Agriculture, and Mechanic Arts of the Agricultural College will be given the regular normal certificate upon the completion of one year of professional work at the State Normal School.

Graduates from the various Manual Training Courses and other short courses of the Agricultural College will be entered for the professional work of the Normal School, and will be given full credit for the work done at the Agricultural College.

Instruction in elementary agriculture will be given the students of the State Normal School, every Monday, by the extension department of the Agricultural College.

Alumni Association.

The Alumni Association was organized in June, 1899. All those who hold degrees in any of the courses in the College are eligible to membership. In the first two classes, three students were graduated with the degree of Bachelor of Civil Engineering, (B. C. E.). Since 1895, five prescribed courses have been offered, but the degree in each has been Bachelor of Science (B. S.), the particular course being specified in the diploma.

OFFICERS FOR 1907-8.

James C. Hogensen, '99, President.
Roy Rudolph, '05, First Vice-President.
Inez Powell, '07, Second Vice-President.
David E. Stephens, '04, Secretary.
Benjamin F. Riter, Jr., '07, Treasurer.

Fourteenth Annual Commencement.

JUNE, 1907.

GRADUATES.

WITH DEGREES.

Bachelor of Science in Agriculture.—Fred Mathews, Eureka, Utah; Preston Geddes Peterson, Logan, Utah.

Bachelor of Science in Domestic Arts.—Inez Powell, Logan, Utah.

Bachelor of Science in Civil Engineering.—Frank Moench, Ogden, Utah.

Bachelor of Science in Commerce.—Aaron Brigham Olsen, Logan, Utah.

Bachelor of Science in General Science.—Francis David Farrell, Logan, Utah; James Leonard Kearns, Salt Lake City, Utah; Benjamin Franklin Riter, Jr., Logan, Utah.

WITH CERTIFICATES.

Agriculture.—Joseph Delbert Barker, Ogden, Utah. George Franklin Barton, Ferron, Utah. Ephraim Fielding Burton, Afton, Wyoming. Wilford Fielding Burton, Afton, Wyoming. Erastus Peterson, Glenwood, Utah. Jerome Wheeler, Slaterville, Utah.

Domestic Science.—Annie Ethelyn Burns, Logan, Utah. Della Cooper, Dempsey, Idaho. Jane Caroline Roberts, Layton, Utah. Vida Margaret Roberts, Layton, Utah.

Commerce.—Leo Bennet, Idaho. John Edward Bramwell, Plain City, Utah. William John Hicks, Bingham, Utah. Robert Lund Judd, St. George, Utah. Joseph Clarence McGown, Custer, Idaho. Ludwig Westerholm, Ivers, Idaho. Junius Leo Whitmore, Price, Utah. Lorin Alma Whitmore, Nephi, Utah.

Manual Training Domestic Arts.—Nellie Barker, Ogden, Utah. Sarah Moselle Bybee, Lewiston, Utah. Jean Crookston, Greenville, Utah. Bertha Kerr, Richmond, Utah.

Manual Training Mechanic Arts.—Alma Frederickson, Colonia Diaz, Mexico. Edward John Passey, Paris, Idaho. George Edward Sandgren, Pleasant Grove, Utah. Dan Arthur Swenson, Pleasant Grove, Utah. John Taylor, Salt Lake City, Utah.

Catalogue of Students.

In the following list A. stands for Agriculture; D. S., for Domestic Science; C., for Commerce; M. E., for Mechanical Engineering; G. S., for General Science; M., for Music; M. A., for Mechanic Arts.

GRADUATES.

Bowman, Verna Pearl (D. S.) Ogden
Peterson, William (G. S.) Logan

SENIORS.

Carver, Heber (M. E.) Ogden
Chambers, Edward (M. E.) Smithfield
Fonnesbeck, Leon (G. S.) Cache Junction
Fleming, Charles Elliott (A.) Logan
Gentry, Ralph (M. E.) Coalville
Hansen, Alva (C.) American Fork
Hill, George Richard (A.) Springville
Homer, Russell King (G. S.) Logan
Horton, John Raymond (G. S.) Ogden
Hudman, Ellis (M. E.) Slaterville
Jacobson, Eunice Estella (G. S.) Logan
Jensen, Christian Nephi (A.) Ephraim
Jensen, Hans Ephraim (C.) Ephraim
Walker, William Laurence (G. S.) Eden

JUNIORS.

Anderson, Jessie Christine (D. S.) Toquerville
Bailey, William Henry (A.) Nephi
Bennion, Earl (A.) Taylorsville
Cardon, Philip Vincent (A.) Logan
Carroll, Ernest (A.) Orderville
Day, William Parley (A.) Fillmore
Evans, Robert James (A.) Lehi
Hoff, Ernest Prior (G.S.) Logan
Homer, Mell (D. S.) Logan
Jacobson, Julius W. B. (A.) Logan

Lee, Ethel (D. S.)	Hoytsville
Morrison, John Alfred (A.)	Logan
McCarty, Edgar Cook (A.)	Logan
Stephens, John (A.)	Logan
Stratford, Ina (D. S.)	Logan
Turpin, George Melvin (A.)	Murray
Walters, Edward Haslam (G. S.)	Logan

SOPHOMORES.

Aldous, Alfred Evan (A.)	Ogden
Ball, Wilbur Mansfield (A.)	Logan
Ballantyne, Alando Bannerman (M. E.)	Logan
Bjerregaard, Walter (M. E.)	Ephraim
Brown, William Wallace (A.)	Logan
Burton, Ephraim Fielding (A.)	Ogden
Crocker, Walter James (A.)	Ogden
Curtis, Ray Barker (C.)	Victor, Ida.
Grue, Joseph (M. E.)	Plain City
Kjar, Lewis Melroy (A.)	Manti
Lloyd, Orson Gunnell (A.)	Logan
Preston, William Booker (G. S.)	Logan
Morrell, Margaret (D. S.)	Logan
McAlister, Charles Davidson (G. S.)	Logan
Nebeker, Herbert John (A.)	Laketown
Oldham, William Brown (A.)	Paradise
Pence, James Dunbar (C.)	Mountainhome, Ida.
Peterson, Dean Freeman (A.)	Scipio
Peterson, Erastus (A.)	Glenwood
Peterson, Willard Larsen (C.)	Petersboro
Riter, William Corlett (A.)	Logan
Sadler, Vincent Alff (A.)	Salt Lake City
Stewart, Robert Haslam (M. E.)	Logan
Stewart, James Haslam (M. E.)	Logan
Sylvester, Frank Jones (A.)	Bellevue
Wallace, Cadmus (A.)	Logan
Winsor, Luther Merkins (A.)	Enterprise
Wyatt, Franklin Archibald (A.)	Wellsville

FRESHMEN.

Anderson, Hans Peter (G. S.)	Hyrum
Bowman, Albert Elijah (A.)	Ogden
Brossard, Edgar Bernard (G. S.)	Logan

Brooks, William (A.)	St. George
Brown, Robert Bruce (M. A.)	Liberty
Brown, Frank Martin (A.)	Logan
Coburn, Elmo Preston (A.)	Wellsville
Cook, Lashbrook Laker (A.)	Garden City
Crafts, Elmer (A.)	Cedar City
Dickson, James Barnard (G. S.)	Logan
Egbert, Archie (A.)	Logan
Egbert, Ivan (A.)	Logan
Froerer, Frederick (A.)	Huntsville
Hanson, Leo Harvey (A.)	Levan
Hartvigsen, Hyrum Jacob (G. S.)	Logan
Hobson, Ivan Leslie (A.)	Logan
Homer, Brigham (A.)	Logan
Irons, Joseph Golden (A.)	Nephi
Jennings, David (A.)	Hinckley
Jensen, Lucile (D. S.)	Brigham
Jones, William Leroy (A.)	Wellsville
Knapp, Alma Jonathan (G. S.)	Logan
Knighton, Lynn Kearns (A.)	Gunnison
Maughan, Merrill Owen (M. E.)	Logan
Merrill, Charles Leo (A.)	Richmond
Monson, Laurence Christian (G. S.)	Logan
Morrison, George Leo (G. S.)	Logan
McAlister, Clair Horton Snow (G. S.)	Logan
Nebeker, Shirley (A.)	Laketown
Paddock, John Stephen (A.)	Logan
Perkins, Daniel Benjamin (A.)	Monticello
Peterson, Jesse Larsen (A.)	Petersboro
Quayle, William Littlefair (A.)	Logan
Robinson, David Earl (A.)	Logan
Robinson, Earl (A.)	Richmond
Sessions, James Wiley (A.)	Logan
Stratford, Alfred Edgar (A.)	Ogden
Tovey, James Chivers (G. S.)	Logan
Turner, Simpson Montgomery (A.)	Logan
Tuttle, Edwin Earl (A.)	Manti
Webb, Alma Jarvis (A.)	St. George
Willey, Joseph Angus (A.)	Layton
Whitehead, Frank George (A.)	St. George
Woolley, Vern Clark (G. S.)	Grantsville
Wrigley, Robert Lecourn (A.)	American Fork

SPECIALS.

Allen, Arba (M.)	Logan
Armstrong, Lucy Isabelle (G. S.)	Logan
Baily, Katheryn (D. S.)	Nephi
Barber, L'Aprile (D. S.)	Logan
Barber, Marie (D. S.)	Logan
Boam, William Thomas (A.)	Salt Lake City
Cardon, Gretta (M.)	Logan
Carter, Wesley J. (M.)	Deweyville
Clark, Samuel Elias (M.)	Logan
Crockett, Henry Wallace (A.)	Logan
Crookston, Jean (D. S.)	Greenville
Evans, Mrs. Hazel (D. S.)	Logan
Fonnesbeck, Lydia (M.)	Logan
Hansen, Allan (C.)	Ogden
Hart, Lucile (M.)	Logan
Hart, Leona (M.)	Logan
Harris, Frank Stewart (G. S.)	Logan
Hayball, Nellie (G. S.)	Logan
Hirst, Charles Terry (G. S.)	Millville
Jensen, Ethel C. (M.)	Logan
Johnston, Donald Kent (M.)	Logan
Larson, Rudolph Victor (G. S.)	Smithfield
Lewis, Agnes (D. S.)	Coalville
Little, Dana Duncan (A.)	Clark, Neb.
Lloyd, Mattie Elizabeth (G. S.)	Logan
Madsen, Howard Peter (G. S.)	Logan
Montrose, Coila (M.)	Logan
Montrose, Edna Vilate (C.)	Logan
Nibley, Anna (D. S.)	Logan
Peterson, John H. (A.)	Smithfield
Perry, Mrs. Howard R. (M.)	Logan
Powell, Jonathan Sockwell (G. S.)	Logan
Shaw, Lela Anna (M.)	Corinne
Shaw, S. Angeline (G. S.)	Corinne
Thatcher, Mrs. Jean (M.)	Logan
Turner, Franklin David (G. S.)	Logan
Van Wagoner, John Daniel (G. S.)	Logan

AGRICULTURE.

THIRD YEAR.

Batt, William	Logan
Caine, Lawrence Ballif	Logan
Holden, James	Logan
Peterson, Christian A.	Newton
Rigby, George Ora	Newton

SECOND YEAR.

Albrethsen, Adolph	Logan
Allen, Merle	Cove
Aydelott, Thirl	Pleasant Grove
Bell, Albert W.	Ogden
Burke, Asahel Woodruff	Cedar City
Caine, George Ballif	Logan
Clark, Ernest	Benson
Hall, Fred	Manti
Hickman, Joseph	Grover
Izatt, Angus	Logan
Jackson, Frank	Randolph
Jones, Jenkin William	Logan
Maughan, Howard	Logan
McNeil, William James	Logan
Nebeker, Leigh	Willard
Oldham, Lloyd	Paradise
Peterson, Vern	Glenwood
Richardson, Lester Amon	Ogden
Rigby, Elmer Clark	Newton
Sharp, David, Jr.	Vernon
Thatcher, Lawrence Young	Logan
Thomas, Verne	Spanish Fork
Wennergren, Oscar	Logan
White, Varien	Logan

FIRST YEAR.

Adams, Leo Charles	Logan
Alley, Willis David	Laketown
Baugh, Francis Heber, Jr.	Logan
Benson, Joseph Guy	Logan
Benedict, George Wallace	Tucker
Borgeson, Andrew Alvan	Santaquin

Calhoun, Elmer Cadwell	Garland
Carlyle, John Thomas	King
Christianson, Archie Louis	Fountain Green
Cox, Amasa Bruce	Fairview
Coombs, Frederick Thomas	Fielding
Dalton, William Shanks	Willard
Ford, Jesse Berry	Kanarra
Green, John Leishman	Wellsville
Hansen, Lloyd	American Fork
Hanson, Joseph Lewis	Fillmore
Hoggan, Robert Walter	Manti
Holden, George	Logan
Hughes, Rowland	Logan
Jensen, John Henry	Fountain Green
Judd, Joseph	La Verkin
King, William Edson	Castle Dale
Lambourne, George	Laketown
Minear, Virgil Luther	Salt Lake City
McCloy, Walter Thomas	Hooper
McKinnon, Robert, Jr.	Randolph
Nelson, Alexander Morgan	Logan
Peterson, Mauritz C.	Mount Pleasant
Peterson, John Leslie	Logan
Price, Robert Leslie	Wellsville
Richards, Lawrence William	Ogden
Richards, Leo Mervin	Fielding
Rigby, Moses	Newton
Seeley, Leo	Mt. Pleasant
Sorenson, George C.	Mt. Pleasant
Thompson, Fred	Spring City
Thompson, Thomas Henry	Spring City
Walker, Vance Dermont	Mendon
Willie, Allen	Mendon
Wheeler, Frederick Martin	Plain City
Wright, Roy	Logan

WINTER COURSE.

Anderson, Elias	Elwood
Bailey, John	Wellsville
Barton, George Franklin	Ferron
Bateman, Philip Thomas	West Jordan
Benson, Joseph	Logan

Boswell, Stephen	Nephi
Brodmerkel, George William	Smithfield
Broby, Niels Rasmussen	Wellsville
Chugg, Ezra Albert	Providence
Corbett, Thomas Moroni	Bountiful
Engstrom, Albert	Huntsville
Fielding, Frank	Logan
Frost, Peter	Benson
Fuhriman, Godfrey Jared	Providence
Hansen, Christian Valdemar	Logan
Hansen, Seth Alfred	Logan
Harris, Emer Martin	Logan
Israelsen, John Andrew	Hyrum
James, William Thomas	Paradise
Kerr, Thomas Leishman	Logan
Larsen, Joseph J.	Newton
Lowe, Thomas A.	Hooper
Martineau, Nephi	King
Martineau, Mrs. Emma	King
Nelson, Charles Walter	Richmond
Odell, J. Fred	Salt Lake City
Olsen, William Arthur	Mt. Pleasant
Oldham, Samuel	Paradise
Pendleton, Frank	Logan
Peterson, Lorenzo	Hyde Park
Poulson, Leonard	Fairview
Rasmussen, Ras	Wellsville
Reynolds, Thomas Henry	Salt Lake City
Richards, Horace Leroy	Fielding
Richins, Charles Parley	Logan
Ryberg, Eric William	Logan
Schoppe, Lewis	Woods Cross
Shaw, Matthew Harrison	Logan
Smith, George Albert	Fielding
Smith, John G.	Salt Lake City
Steed, Horace Jay	Hooper
Steele, William George	Logan
Thygerson, Joseph	Logan
White, Leroy Davis	Parry
Wadley, John Eamer	Pleasant Grove
Wright, Thomas Lynn	Nephi
Zollinger, William Richard	Providence

FORESTRY.

Anderson, Andrew Lorenzo	Mink Creek, Ida.
Bracken, Lawrence	Pine Valley
Bullock, Joseph Bailey	Providence
Clabby, Robert Emmet	Weiser, Ida.
Christensen, Moses	Logan
Christensen, James William	Newton
Crockett, Vernon Winslow	Logan
Dalton, James Mathews	Willard
Dahlquist, Ray Andrew	Logan
Dillon, Edward Alvin	Kamas
Evans, Gronway C.	Kamas
Ezell, Simmer Tate	Mackay, Ida.
Garrison, James	Kooskia, Ida.
Hammond, Lorenzo Edwin	Providence
Haskell, David Elijah	Newton
Herbert, Ernest William	Salina
Hess, Charles E.	Boise, Ida.
Hull, Robert McClellan	Whitney, Ida.
Hunter, Albert	American Fork
Irons, William M.	Moroni
Ivie, Ray	Carey, Ida.
Jensen, Steen	Logan
Keaton, George Daniel	Logan
Larsen, Peter	Greenville
Madsen, Parley C.	Mt. Pleasant
Morgan, Joseph Lewis	Willard
Morris, Elson	St. George
McGhie, William Mathews	American Fork
Nielsen, Erastus, Jr.	Logan
Nielson, Oluf George	Koosharem
Pelton, James Lamberton	Mackay, Ida.
Peterson, Paul Lorenzo	Hyde Park
Peterson, Marinus Parley	Newton
Reid, Roy Shields	Preston, Ida.
Richins, George Edward	Echo
Sherf, Hans	Bozeman, Mont.
Smith, Herbert Lawrence	Logan
Smith, George Lewis	Logan
Smith, Harl Burnham	Logan
Stines, John Ernest	Logan

Theurer, David Orson	Providence
Thomas, Guy Leland	Logan
Tobias, Ross Solon	Smithfield
Vance, Arthur	Fairview
Washburn, Wilbur Wallace	Ogden
Woolley, Herbert E.	Kanab
Woolstenhulme, John Haslam	Marion
Wyatt, Ralph Archibald	Wellsville
Yeaman, Charles Sterling	Huntsville

DOMESTIC SCIENCE.

THIRD YEAR.

Justesen, Norma Fay	Deseret
Mathews, Ruby Ethel	Logan
Mathisen, Anna	Logan

SECOND YEAR.

Andrews, Luella	Logan
Hyde, Clara	Logan
Monson, Alta	Logan
Morrell, Winnifred	Logan
Nelson, Eleda	Logan
Nebeker, Lottie Dean	Logan
Owen, Alta Benson	Wellsville
Smith, Emma May	Kanarra
Tuttle, Clara Elizabeth	Logan

FIRST YEAR.

Anhder, Eva Almania	Hyrum
Best, Violet Irene	Ogden
Griffith, Lottie Goodwin	Benson
Hopkins, Barbara	Logan
Izatt, Irene	Greenville
Johnson, Myrtle Ivy	Garden City
Korupkat, Winnifred	Logan
Lashus, Glenna	Ogden
Lee, Lucile	Hoytsville
Munro, Ethel Dorothy	Logan
McKinnon, Vada	Randolph
Nelson, Anna	Logan

Raymond, Loila	Smithfield
Richards, Carrie	Fielding
Von Nordeck, Grace	Gunnison
Wadman, Ruby May	Logan

COMMERCE.

THIRD YEAR.

Andrews, Junius James	Logan
Andrews, Michael, Jr.	Logan
Bell, Thomas Ray	Richmond
Cahoon, George Wait	Deseret
Greaves, Harley	Preston, Ida,
Hansen, Erlese Peter	Providence
Jensen, Effie	Mendon
Justesen, Barney	Deseret
Larsen, Johanna	Logan
Lund, Lettie	Logan
Marley, Joseph Alma	McCammon, Ida.
Maupin, Emilie Martha	Logan
Morgan, John Devere	Collinston
Nelson, Jeannette	Logan
Taylor, Vera Evelyn	Ogden
Webb, Joseph Eugene	Richmond
Weston, George Nehemiah	Logan

SECOND YEAR.

Amussen, Theodore Smith	Logan
Barret, Adeline Patti	Logan
Brinkerhoff, Royal	Thurber
Brinkerhoff, Willard	Thurber
Bunderson, Hervin	Logan
Costley, Grant	St. Anthony, Ida.
Dunlop, Louise	Logan
Froiseth, Robert Strong	Salt Lake City
Green, Alfred John	Ophir
Halgren, Levon Oscar	Logan
Jensen, James Leroy	Hyrum
Johnson, Berdie Elenor	Logan
Johnson, Sarah	Logan
Laurenson, Frank William	Downey, Ida.
Lewis, Clair	Logan

Merrill, Lorin Smith	Logan
Monson, Alfred Peter	Pleasant Grove
McIntyre, Oscar	Logan
Pace, Vern Willard	Loa
Plant, Henry Thomas, Jr.	Richmond
Rogers, Lemuel Van	Fielding
Secrist, Jesse Avern	Logan
Sessions, Harvey Homer	Logan
Smart, Melvin S.	Salt Lake City
Smith, William Leroy	Logan
Van Tunks, Sam	Logan
Waters, Raymond	Logan

FIRST YEAR.

Albrethsen, Adolph	Picabo, Ida.
Barber, Wynona	Logan
Bennett, Jerold	Deseret
Borgeson, Lizzie	Santaquin
Crookston, Newell James	Greenville
Cowley, Abner Israel	Venice
Evans, Edward Regan, Jr.	Park City
Evans, Thomas Wright	Brigham
Greenhalgh, Violet Maurine	Logan
Hartley, Richard, Jr.	Rockland, Ida.
Hayball, Edith	Logan
Hendricks, Joseph Earl	Logan
Hitt, James Russell	Logan
Holmes, David Whittaker	Oakley, Wyo.
Janson, Gilbert L.	Gunnison
Johnson, Heber Grant	Preston, Ida.
Madsen, Vera Mae	Logan
Montrose, John Leslie	Logan
Munro, Mamie	Logan
McCombs, Ezra Fisk	Logan
McKnight, Virgil	Red Rock, Mont.
McVay, Wallace	Logan
Nelson, Alta	Smithfield
Nelson, Mamie Cornelia	Logan
Nelson, Orene	Preston, Ida.
Nielson, Martin	Logan
Oldroyd, Lorin Todd	Glenwood
Porter, Parley	Logan

Peterson, Brigham	Santaquin
Peterson, Clara Matilda	Logan
Petty, James Edgar	Deseret
Richards, Seeburn	Gunnison
Robinson, John C.	Lyman, Ida.
Sewell, Henry	Ogden
Smart, William Haines	Vernal
Speiermann, Marietta	Logan
Spencer, Charles Cadwell	Randolph
Stender, Julius Frederick Henry, Jr.....	Logan
Tarbet, Agnes	Logan
Walters, Sarah	Logan
Whitehead, Austin	Hinckley
Wright, John William	Hinckley

WINTER COURSE.

Bingham, Elisha Harrison	Garland
Bingham, Ray Elmo	Cornish
Blair, Jedediah Morgan, Jr.	Logan
Christiansen, Walter Edward	Salt Lake City
Davis, Alma Charles, Jr.	Spanish Fork
Drysdale, William Louis	Logan
Hancey, George Ernest	Hyde Park
Heyrand, Wilford Fred	Logan
Peterson, Victor	Logan
Seppich, Claude	Evanston, Wyo.
Shaw, George Samuel	Liberty
Swanson, Wilford	Mendon

DOMESTIC ARTS.

THIRD YEAR.

Frederickson, Emma	Salt Lake City
Fuller, Annabelle	Eden
Jensen, Sylvia	Logan

SECOND YEAR.

Bryner, Ada	Price
Crane, Rebecca	Salina
Crookston, Lucile	Greenville
Daniels, Virginia	Logan
Froiseth, Dorothy	Salt Lake City

Fuller, Lyda Elizabeth	Eden
Greenhalgh, Cora Elma	Logan
Jones, Rachel Cecelia	Logan
Knudson, Lewinna	Brigham City
Laurenson, Lillie	Downey, Ida.
Mathews, Etta	Eureka
Morrison, Anna M.	Logan
Nelson, Harriet	Logan
Peterson, Ada	Logan
Stratford, Pearl	Logan
Thatcher, Ethel	Logan

FIRST YEAR.

Adams, Venice	Logan
Chadwick, Eva	Park Valley
Charles, Alice	Logan
Drysdale, Lizzie	Logan
Dunford, Margaret	Salt Lake City
Farnsworth, Florence	Joseph, Ore.
Greenhalgh, Eurilla	Logan
Hanson, Margaret Lewinna	Providence
Hayball, Lucile	Logan
Herbert, Mable	Salina
Holden, Mittie	Logan
Homer, Elnora	Trenton
Hunsaker, Veda	Honeyville,
Jardine, Leonora	Logan
Johnson, Marie C.	Salt Lake City
King, Mrs. Annie J.	Castle Dale
Larsen, Zina	Greenville
McIntyre, Lena	Price
McNeil, Janet	Greenville
Nelson, Ruby	Greenville
Norr, Alvira	Logan
Nyman, Christine	Greenville
Nyman, Della	Greenville
Ormond, Susan	Greenville
Richards, Rena L.	Fielding
Rosza, Patience	Logan
Wheadon, Bessie	Coalville

WINTER COURSE.

Cox, Sadie	Logan
Jones, Bertha	Wellsville
Newey, Edith	Logan
Phillips, Jennie	Nephi
Rasmussen, Mary	Wellsville
Wright, Hattie	Nephi

MECHANIC ARTS.

FOURTH YEAR.

Beck, Alma	Spanish Fork
Mitchell, Edgar Bently	Logan
Olsen, Charles Henry	Crescent
Thatcher, Frank Davis	Logan

THIRD YEAR.

Aldous, Sidney Edgar	Huntsville
Davis, John Morgan	Garland
Frew, William Amos	Hoooper
Miller, Joseph Royal	Farmington
Olsen, Joseph William	Sandy
Sandberg, Neils, Jr.	St. George

SECOND YEAR.

Clark, Joseph Albert	Liberty
Decker, Francis Zachariah	Sanford, Colo.
Hair, James Clifford	Bingham
Ivie, Jacob William	Loa
Krogue, Leonard	Bloomington, Ida.
Laurenson, Charles	Downey, Ida.
Mortimer, William	Logan
McLaws, Elbert	Tooele
Nelson, John Albert	Huntsville
Pack, Ulysses	Kamas
Parkinson, Raymond Charles	Franklin, Ida.
Steed, James Thomas	Deweyville
Swenson, Helga Vincent	Pleasant Grove
Thain, Wilbur	Logan
Webb, Heber Jarvis	St. George
Welling, Truman Leroy	Fielding

FIRST YEAR.

Adams, Floyd Samuel	Logan
Aldous, Clarence Moroni	Huntsville
Beaman, Eugene	Stockton
Beatie, Walter Sidney	Salt Lake City
Black, Charles Thomas	Marysville
Booth, George Henry	Stockton
Brandt, Ira Clayton	Salina
Cahoon, John Martin	Deseret
Cahoon, Ray Proctor	Murray
Cantwell, Milo	Smithfield
Catlin, Floyd Delroy	Tacoma, Nev.
Chadwick, George Alanzo	Park Valley
Chadwick, Henry	Park Valley
Crane, Leroy Elmer	Draper
Doutre, Steven	Nephi
Durfee, Perry Freeman	Logan
Hansen, Oliver Moroni	Logan
Harris, Leander S.	Logan
Harris, Leroy	Providence
Harris, Thomas Andrew	Ogden
Hartley, Urbon Uriah	Fairview
Hill, Alexander	Logan
Hougaard, Wilford Ray	Manti
Humphrey, Rufus Kirk	Logan
Inglet, Parley John	Hyde Park
Irvin, Ray Nesbitt	Salt Lake City
Johannesen, Henry George	Idaho Falls, Ida.
Johnson, Owen	Logan
Kimball, Quince Lavon	Smithfield
Kletting, Richard, Jr.	Salt Lake City
Langford, Lester Olson	Salt Lake City
Larsen, Lewis Lawrenson	Fairview
Larsen, Nephi Lawrence	Logan
Lewis, Thomas Jones	Garland
Mantey, Julius Robert	Bellevue, Ida.
Mickelsen, John Henry	Logan
Morrison, Joseph	Logan
Moore, Edwin Ward	Hooper
McChrystal, Jason	Salt Lake City
McCulloch, George	Logan

Napper, Mark	Logan
Oldroyd, Peter Clinton	Fountain Green
Peterson, Charles L.	Park City
Pilkington, Leland	Smithfield
Riggs, Alma Lavern	Millville
Seebeck, Herbert C.	Twin Falls, Ida.
Sharp, John Aden	Ruby Valley, Nev.
Smith, Wesley Ensign	Logan
Stander, George Henry	Blackfoot, Ida.
Steed, Gerald Miller	Farmington
Stephens, William	Logan
Tregaskis, Sidney Richard	Bingham
Williams, George Thomas	Kamas
White, Thomas Lawrence	Porterville

WINTER COURSE.

Anderson, John	Heber
Ashcroft, George	Hyde Park
Barber, Herbert Raymond	Logan
Bean, Bert	Salt Lake City
Bullen, Russell	Richmond
Burbidge, William A.	Kamas
Chambers, James	Greenville
Carlson, James	Canada
Christofferson, Alfred	Hyrum
Clark, Walter	Liberty
Crookston, Burns	Greenville
Cronquist, Elim	Greenville
Dahle, George	Logan
Davis, Earl	Wallsburg
Gnehm, Emil Alfred	Logan
Grunder, John	Logan
Hansen, Christian	Bear River
Hansen, Peter	Bear River
Haws, Vaughan	Logan
Hoefler, Emil August	Logan
Hoef, Eddie	Vernal
Holmes, Robert	Liberty
Jensen, Jacob C.	Murray
Jensen, Hyrum A.	Murray
Jones, Benjamin	Providence
Lyman, Merl	Salt Lake City

McQuarrie, Paul	New York City
Parry, Foster John	Logan
Pederson, Hans	Greenville
Peterson, Arthur	Logan
Peterson, Fred, Jr.	Mt. Pleasant
Powell, Milton Leaver	Salt Lake City
Reid, Lee	Preston, Ida.
Smithers, Frank	Kamas
Stoddard, Walter	Hooper
Tibbitts, Marion	Providence
Weidman, Joseph Lorenzo	Bear River
White, John Fife	Parry

COLLEGE PREPARATORY.

SECOND YEAR.

Allen, Cliff	Smithfield
Anderson, Andrew	Logan
Brossard, Roland Elmer	Logan
Clemenson, Wendell Lapsley	Logan
Cooper, Raymond Harry	Logan
Day, Carl Homer	Fillmore
Dunlop, Scott Barrett	Logan
Goodwin, Earl	Logan
Jones, Inez	Smithfield
Macfarlane, Chancey	St. George
Major, Jackson	Ogden
Martineau, Charles Freeman	Logan
Martineau, Bryant Sherman	Logan
* Martineau, Vere Lawrence	Logan
Mohr, Ernest	Logan
Newey, John Mathews	Ogden
Olsen, Arthur Lorenzo	Logan
Powell, William Hartlett	Salt Lake City
Shaw, Roy Thomas	Paradise
Stratford, Ray Percy	Logan
Taylor, Marion	Logan
Wendelboe, Diamond	Logan

FIRST YEAR.

Anhder, Earl	Hyrum
Boyle, John Milton	Arco, Ida.
Brandt, Durrell	Salina
Crookston, Ray	Cache Junction

Dobbs, Lewis Harrison	Bingham
Doutre, William	Nephi
Gibbs, Vernon	Marysville
Hansen, Alma Wilford	Logan
Harris, William Zera	Richmond
Hill, David	Logan
Hill, Walter Scott	Deweyville
Jones, Albert Edward	Logan
Jones, Amos Peter	Logan
Johnson, Elmer	Logan
Linnartz, Emma	Logan
Martin, George Wayne	Tooele
McKinnon, Vilate	Randolph
Nebeker, Frank Knowlton	Logan
Olsen, Vernon Christian	Hyrum
Palmer, Errol	Logan
Rose, Arline	Logan
Tarbet, Florence	Logan
Thomas, James	Logan
Walters, Alexander Herron	Tooele
Webb, Ruby	Deseret
Willis, Bertie Donald	Heber
Wyatt, Robert Archibald	Wellsville
Yeates, Ford	Logan

WINTER COURSE.

Christofferson, Fred	Logan
Christofferson, James	Logan
Christofferson, Walter	Logan
Goodwin, Charles Henry	Logan
Hansen, Frank	Logan
James, Christopher George	Providence
James, Raymond Albert	Arco, Ida.
Jones, Hilda	Logan

OPTIONALS.

Adams, Thomas S. (M. A.)	Logan
Bjarnason, Loftor (Col. Prep.)	Greenville
Decker, Mrs. Louise (D. S.)	Logan
Farrell, Gladys Adeline (C.)	Smithfield
Harker, Edith (D. S.)	Logan

Hunter, Myrtle (D. S.)	Logan
Lundberg, Mary (C.)	Logan
Mathisen, Sophie E. (D. S.)	Logan
Morris, Jennie L (C.)	Logan
Nelson, Essie Jean (C.)	Logan
Nelson, Nels John (M. A.)	Logan
Peterson, Oliver Larsen (C.)	Mendon
Redford, Nora Lloyd (G. S.)	Logan
Richards, Mary Florence (C.)	Logan
Rose, Mosella (D. S.)	Logan
Rust, Emma Virginia (C.)	Logan
Simonds, Lillian (C.)	Logan
Stevens, Emma Jones (C.)	Logan
Thatcher, Patience (M.)	Logan
Toorea, Effie Etta (C.)	Oscalosa, Ia.
Toyn, Alma (Col. Prep.)	Grouse Creek
Whitt, William Edward (C.)	Swan Lake
Woolf, Zina (D. S.)	Logan
Wright, Edgar Monroe (C.)	Logan

SUMMER SCHOOL.

Alder, Byron	Manti
Alder, John Alfred	Manti
Allen, James C.	Coalville
Allen, Jennie Mary	Logan
Allen, Lenna	Cove
Allen, Mary	Wellsville
Amussen, Heber Smith	Logan
Amussen, Mabel S.	Logan
Anderson, Ida	Logan
Apperley, William Henry	Logan
Baker, Olive	Mendon
Benson, John Phineus	Newton
Bjarnason, Loftor	Greenville
Baer, Margaret	Providence
Blackwood, Myrtle	Ogden
Chambers, Parley Calvin	Smithfield
Christensen, Jennie	Hyrum
Clark, Samuel Elias	Logan
Clawson, August J.	Logan
Coburn, Ivy	Wellsville

Cole, Edna	Logan
Cole, Ira Arnold	Logan
Cook, Marion	Ogden
Crookston, Alice	Greenville
Erickson, Eldena	Preston, Ida.
Erickson, Ephraim	Preston, Ida.
Farrell, Lorraine	Logan
Gardner, John William	Pine Valley
Hall, Olive	Garland
Halling, Elvina	Geneva
Hammond, Horton	Providence
Hansen, Nellie Page	Logan
Hayball, Nellie	Logan
Hendricks, Nellie	Logan
Hinckley, Bessie	Liberty
Hobson, Gertrude	Logan
Homer, Russell King	Logan
Hull, Alvin C.	Whitney, Ida.
Jensen, Alice	Hyrum
Jones, Rose	Logan
Kewley, Alice	Hyrum
Kewley, Ann	Logan
King, Priscilla	Logan
Martin, Susie	King
Mathews, Hannah	King
Mathews, Margaret	King
Mauritsen, Dagmar	Logan
Merrill, Ada	Richmond
Miles, Jennie	Paradise
Miner, Ernest Leroy	Fariview
Monro, Florence	Logan
Morrell, Margaret	Logan
Morrison, John Alfred	Logan
Munk, Elizabeth	Logan
Nebeker, Eva	Logan
Neddo, Hannah Pearl	Logan
Nibley, Anna	Logan
Olsen, Aaron Brigham	Logan
Olsen, Emily	Paradise
Olsen, Hilda	Hyrum
Ostlund, Jenette	Logan
Parker, Sarah M.	Hooper

Parkinson, Lillian	Hyrum
Parry, Vaughan	Logan
Peterson, Christian A.	Newton
Ralph, Clara	Hyrum
Raymond, Anna L.	Logan
Redford, Mary	Logan
Scholes, Caroline	Logan
Shipley, Elizabeth	Paradise
Stoops, Josephine	Logan
Taylor, Ida	Willard
Thompson, Olga	Logan
Tibbetts, Lorenzo	Providence
Walters, Edward H.	Logan
Wild, Zera	Logan
Williamson, Mary	Wellsville
Williamson, Ruby	Wellsville
Williamson, Ruby W.	Paradise
Wilson, Esther D.	Logan

NIGHT SCHOOL.

DOMESTIC ARTS.

Adams, Mrs. Armenia	Logan
Allen, Mrs. Annie	Logan
Allen, Nettie	Logan
Anderson, Mrs. Annie	Logan
Anderson, Blanche	Logan
Anderson, Nora	Logan
Ballif, Claremond	Logan
Barrett, Sarah F.	Logan
Best, Violet Irene	Ogden
Betts, Mrs. Iris	Logan
Budge, Margaret S.	Logan
Christensen, Eunice	Logan
Cole, Bessie	Logan
Cutler, Mrs. M. H.	Logan
England, Ada	Logan
Gardner, Josephine	Logan
Greenhalgh, Mabel	Logan
Hansen, Aletta	Logan
Hansen, Elnora D.	Logan

Hansen, Mrs. N. A.	Logan
Hansen, Vera	Logan
Harris, Della	Providence
Harris, Ruby	Logan
Harry, Mada	Logan
Heath, Julia	Logan
Hendricks, Emma	Logan
Hogensen, Mrs. Lyda B.	Logan
Hopkins, Mrs. R. C.	Logan
Humphrey, Mrs. Martha	Logan
Jensen, Mrs. Iola T.	Logan
Jensen, Mamie	Logan
Jessop, Ella	Logan
Jessop, Gillie	Logan
Johnson, Eliza	Logan
Kloepfer, Elizabeth	Logan
Larsen, Mrs. Anna	Logan
Larsen, Johanna	Logan
Larsen, Katie	Logan
Lashus, Glenna	Logan
Lundberg, Elvir	Logan
Marshall, Mrs. F. J.	Logan
Maupin, Emilie	Logan
Mathisen, Emma	Logan
Mathisen, Sophie	Logan
Merrill, Sarah A.	Logan
Mickelson, Nellie	Logan
Montrose, Coila	Logan
Morehead, Maggie	Logan
Morris, Jennie	Logan
McDaniels, Mrs. Kezia	Logan
McKinnon, Vilate	Logan
McNeil, Rose	Logan
Nelson, Mrs. Edith	Logan
Nelson, Emily	Logan
Nelson, Essie	Logan
Neuberger, Lizzie	Logan
Neuberger, Nettie	Logan
Newbold, Mrs. Jos.	Logan
Nibley, Julia B.	Logan
Niederhauser, Lena	Logan
Niederhauser, Martha	Logan

Niederhauser Rosa V	Logan
Nielson, Mrs. Eliza V.	Logan
Oldham, Mrs. Ella	Logan
Olsen, Mrs. Alma	Logan
Pace, Effie	Logan
Partington, Josephine	Logan
Partington, Rachel	Logan
Peterson, Elvine	Logan
Peterson, Estella	Logan
Peterson, Mary	Logan
Peterson, Violet	Logan
Richards, Florence	Logan
Ricks, Rhea	Logan
Robbins, Emma	Logan
Ruchti, Louise	Logan
Seeholser, Mrs. Palmyra	Logan
Stewart, Mrs. Jane G.	Logan
Taylor, Mrs. A. S.	Logan
Turner, Zettie	Logan
Tyson, Mrs. Louise	Logan
Vogel, Mary	Logan
Wallace, Mrs. Cadmus	Logan
Wayman, Jessie	Logan
Wilmore, Laura	Logan
Worley, Hazel	Logan
Young, Ada	Logan
Young, Helen	Logan

MECHANIC ARTS.

Adams, John Vernon	Logan
Adams, Thomas	Logan
Aebischer, Charles	Logan
Aebischer, Joseph	Logan
Bailey, Lue Jones	Logan
Batt, George	Logan
Baugh, Elmer	Logan
Beatie, Walter Sidney	Salt Lake City
Betts, D. S.	Logan
Black, Charles Thomas, Jr.	Marysvale
Blickensderfer, Alma	Logan
Brinkerhoff, Willard	Logan
Carlson, Parley	Greenville

Christensen, James	Logan
Chugg, Willard H.	Providence
Cronquist, Elim	Greenville
Dahle, John	Logan
Davidson, Golden	Greenville
Duce, John	Logan
Ellis, Oliver	Logan
Ewer, George	Logan
Fuhriman, Arnold J.	Providence
Fuhriman, Ezra	Providence
Grunder, John	Logan
Hansen, C. V.	Logan
Hayball, Knowlton	Logan
Hayball, Leland	Logan
Heath, William	Logan
Hitt, James R.	Logan
Hoefer, Emil August	Logan
Hopkins, John H.	Logan
Hopkins, LeRoy	Logan
Hougaard, Roy	Manti
Jensen, Elmer	Logan
Jensen, William	Logan
Johnson, Parley	Logan
King, John	Greenville
Larsen, John A.	Logan
Larsen, Lester	Greenville
Larsen, Oliver	Greenville
McCulloch, David	Logan
McCulloch, Lawrence	Logan
Mortimer, William	Logan
Nelson, David	Logan
Neuberger, John	Logan
Nielson, Erastus, Jr.	Logan
Nielson, Peter W.	Logan
Norr, Thomas	Logan
Parry, Wilford	Logan
Pederson, Hans	Logan
Peterson, Franklin	Greenville
Peterson, George Osborn	Logan
Peterson, William	Logan
Ricks, Lewis	Logan
Rose, Clarence	Logan

Sadler, Vincent A.	Salt Lake City
Skablund, John	Logan
Stewart, James H.	Logan
Weber, Albert	Logan
Wyatt, Franklin A.	Wellsville

SUMMARY BY COURSES.

Agriculture	233
Domestic Science and Arts	100
Commerce	117
Mechanical Engineering and Mechanic Arts.....	132
General Science	31
Music	14
College Preparatory	60
Summer School	80
Night School	148
Names repeated	915
Names repeated	33
Total Registration	882

SUMMARY BY YEARS.

Graduates	2	
Seniors	14	
Juniors	17	
Sophomores	28	
Freshmen	45	
Fourth Year (with rank of freshman).....	4	
Third Year (with rank of freshman)	25	
Specials	37	
Total of college grade		172
Third Year	9	
Second Year	114	
First Year	208	
Winter Course—		
Agriculture	47	
Forestry	49	
Commerce	12	
Domestic Arts	6	
Mechanic Arts	38	
College Preparatory	8	
		160
Optionals	24	
Total High School and Preparatory		515
Summer School		80
		767
Less names repeated		9
Total Registration in Regular Work		758
Night School—		
Domestic Arts	88	
Mechanic Arts	60	
		148
Less names repeated	24	
Total registration in all work		124
		882

INDEX.

Accounting and Administration	80
Admission, Conditions of	30
Agricultural Technology	72
Agriculture, Courses in	38-44
Agriculture, Department of	57
Agriculture, School of	36
Agronomy	57
Alumni Association	122
Animal Husbandry	60
Art	88
Athletics	32
Bacteriology	89
Board of Trustees	5
Botany	89
Buildings and Grounds	20
Calendar	3
Carpentry	84
Carriage Building	85
Catalogue of Students	124
Certificate of Graduation	31
Charges	34
Chemistry	91
Classification of Students	31
College Calendar	3
College Council	11
College Faculty	6
College Magazine	33
College Preparatory Course	55
College Societies	32 34
Commerce, Courses in	49-50
Commerce, Department of	78
Commerce, School of	48
Cooking	74
Dairying	61
Departments of Instruction	57
Domestic Science, Courses in	45-47
Domestic Science and Arts, Department of.....	74

Domestic Science and Arts, School of.....	45
Drainage	66
Drawing	88
Economics	78
Elementary Agriculture	57
Elocution	96
English	94
Entomology	63
Equipment of College	23
Examinations	30
Expenses, Students'	34
Experiment Station	28
Experiment Station Staff	12
Extension Department	117
Faculty	6
Faculty, Standing Committees of	14
Forestry	64
Forging	85
Foundry Work	87
French	105
General Information	15
General Science Course	53
General Science, School of	53
Geology.	97
German	106
Government of the College	17
Graduates	123
Graduation	30
History	98
History of the College	15
Holidays. See "College Calendar"	3
Horticulture	64
Irrigation and Drainage	66
Laboratories. See Equipment.....	23
Latin	107
Library	27
Library Work	99
Location of the College	20
Machine Work	86
Mathematics	100
Mechanical Drawing	84
Mechanic Arts, Department of	83

Mechanic Arts, Course in	52
Mechanic Arts, School of	51
Military Science and Tactics	102
Mineralogy	98
Modern Languages	105
Museum	27
Music	108
Normal Training	121
Officers of Instruction and Administration	5
Penmanship	83
Physical Education	113
Physics	114
Physiology	115
Policy of the College	19
Political Science	80
Poultry Craft	61
Registration	31
Schools and Courses of Study	35
School of Agriculture	36
School of Commerce	48
School of Domestic Science and Arts	45
School of Mechanic Arts	51
School of General Science	53
Sewing	78
Sloyd	87
Spanish	106
Special Students	31
Standing Committees	14
Stenography	82
Student Societies	32
Students, Catalogue of	124
Students' Expenses	34
Summary of Students	148-149
Summer School	120
Technology... ..	83
Trustees, Board of	5
Typewriting	82
Veterinary Medicine	68
Veterinary Science	70
Winter Courses	119
Zoology	115



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**Illustrated descriptive circulars
dealing with the work of the various
schools—Agriculture, Domestic Science and
Arts, Commerce and Mechanic Arts—and with
student activities, will be published during the summer.**

WRITE FOR COPIES

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